

MSR
Community Technologies Group
Overview

August 16, 2002

Community Technologies Group

Study, map, and measure
social cyberspaces

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Explore emergence of “collective computing”

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Create novel and useful interfaces to social
cyberspaces

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Support Microsoft Community initiative

Community Technologies Group

- **Marc Smith**, *Research Sociologist*
- **Duncan Davenport**, *PM, Tech Lead*
- **Paul Johns**, *SQL Lead*
- **Matt Kearns**, *SQL Dev*
- **Dany Rouhana**, *Web Dev Lead*
- **Bas Hugenholtz**, *Web Dev*
- **Fernanda Viegas**, *Intern 2002*
- **Lik Mui**, *Intern 2002*

Product Group Relationships

- CDDG
 - Microsoft.com Community Platform Team
- Office (11)
 - AWS (Assisted Web Support) Office Community
- PSS
 - Community Support Team
- Developer Support
 - Platform SDK
- Intranet Portal Strategy – Internal Community
 - MSTE, HR, Library, ITG, eKM

MSR Community Research: User Tasks

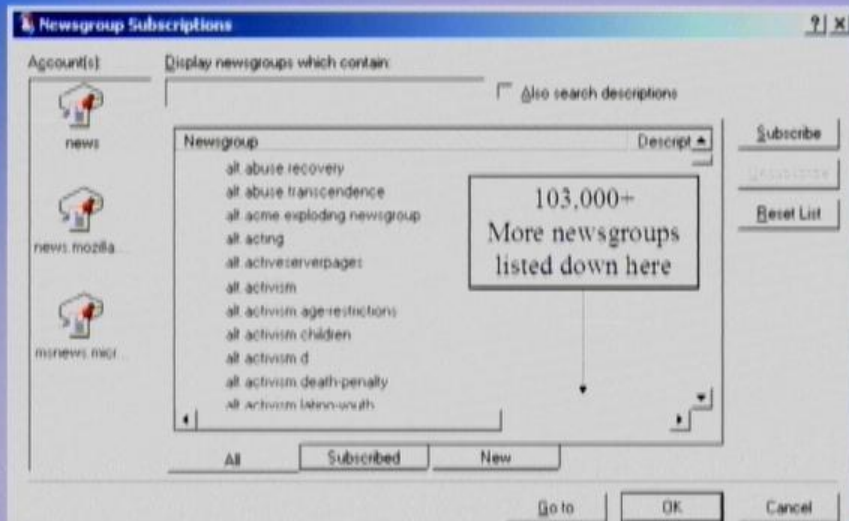
- Discovery:
Which community to access?
- Navigation/Selection:
What content to make use of?
- Evaluation:
What is the value of selected content?
- Motivation:
Why should I contribute (more|better|faster)?
- Content Creation:
How can I build up useful artifacts from conversations?

Community Research Road Map

- **Data Mining Social Cyberspaces:**
Produce and refine community data processes in SQL
- **Social Accounting Metrics**
Develop measures and evaluate Microsoft communities
- **Interfaces and Visualizations**
Tree maps, thread tree visualizations, piano rolls, network visualizations
- **Server development**
Create prototype integrated community server
- **Field studies**
Deploy and evaluate use by a Microsoft Beta community

Existing interfaces to persistent conversations are limited

Most interfaces provide little or no indication of group size, activity, interconnection, growth, topic...



Existing conversational interfaces lack social data

#	File Name	Topic	Date	Size
1	Working with rows in a grid	Academich	3-3-2000 10:52	100
2	Wessex help	Lead	3-3-2000 10:53	100
3	Re: Wile 2047	Carole K. Hart-Jones	3-3-2000 11:06	90
4	Re: Wile 2047	James Webb	3-3-2000 11:06	400
5	What is OpenForm in Forms alone	rdmccrino	3-3-2000 11:09	100
6	Re: WebDeveloper 1 control	Alexander Kalligian	3-3-2000 11:17	100
7	Re: VB: Traversal	Kishore Hosang	3-3-2000 11:18	100
8	VB: ASP in WebForm modules VB: ASP?	James	3-3-2000 11:30	100
9	Re: VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100
10	Re: VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100
11	VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100
12	VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100
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49	VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100
50	VB: WebForm DLL Call	Luigi L'Es	3-3-2000 11:47	100

Common interfaces to messages and threads organize content only by

Subject line text, author name, message size, and date.

Important social dimensions of these interactions are missing in these interfaces, for example:

Population, activity trends, posting history, thread structures.

Community Opportunities

"Helping our customers help our customers."

- **For Microsoft, community can help us**
 - Diffuse the product support burden
 - Listen more effectively to customer feedback
 - Build customer loyalty
 - Cultivate 3rd party champions who speak more authentically than we can ourselves
- **For our customers**
 - They want to do all of this too for their own customers!

Community Challenges

For Managers:

Platform

Tools (message boards, profiles, indexes) are crude and lack integration.

Assessment

It is difficult to know much about the size, activity, usefulness and general health of a community.

Who are the valuable people?

What topics are "hot"?

Is what I am doing here useful?

Incentive

How to encourage better contributions?

For Participants:

Discoverability

Most people can't find communities, community tools are separate from applications.

Selection

How to choose among hundreds of thousands of messages?

Evaluation

How to determine the quality of responses?

Motivation

Why should I contribute more, better, faster here?

MSR Netscan

News group Social Accounting Reporting Service

NETSCAN



40 Products - News - Search - Microsoft.com

Microsoft

Home - Tree Map - Group Mail View/Status - Community Research Group - Add New Netscan List - Questions and Comments

Home

Tree Map

Group Mail

Group Mail

Group Mail & News

Group Mail & News

Group Mail & News

Group Mail & News

Group Mail & News

Group Mail & News

Group Mail & News

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NEWSGROUP TRACKER

Find groups where name **h** starts with **h** contains **h** **h** or **h** and

Group data for the following date (mm/dd/yyyy): 01/01/2001

Show Info

Day	Week	Month	Year	Group	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993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NEWSGROUP TRACKER

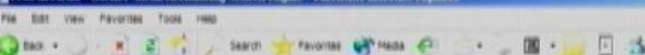
Find groups where name contains [] or contains []

Show data for the following date range: [] to [] [Show Data](#)

Data available through 06-26-2002

Day Week Month of June

104 Newsgroups	Posts	Posters	PPRatio	Returnees	AvgLineCT	Resps	Rephrs	Singles	unRMSGS	XPosts	XPT
microsoft public: us general discussion	1411	159	9	41	19	1154	93	844	111	111	84
microsoft public: usnet languages: vb	1079	119	21	14	18	1428	79	819	108	111	82
microsoft public: us: vb	1066	116	1	132	42	1811	121	116	181	1	11
microsoft public: de: vb	1041	104	1	101	24	1000	108	107	107	10	10
microsoft public: fr: vb	1011	112	24	11	44	1009	107	107	104	10	10
microsoft public: scripting: vbscript	1019	110	47	147	19	1009	148	100	10	100	10
microsoft public: vb: winapi	1011	109	17	104	47	1001	107	101	10	100	10
microsoft public: vb: database: ado	1011	109	10	108	11	1181	108	107	10	100	10
comp.lang.vb	1009	110	10	108	11	1140	107	101	10	100	10
microsoft public: access: modules: acdb	1001	101	11	101	47	100	101	100	10	100	10
microsoft public: vb: controls	1009	110	41	111	11	100	109	100	100	100	10
microsoft public: de: german: entwicklung	1001	101	18	10	41	100	101	100	100	100	10
autodesk: autocad: customization: vb	1001	101	10	10	11	100	101	100	100	100	10
microsoft public: word: vb: general	1001	101	10	10	41	100	101	100	100	100	10
fr: some: programming: vb	1001	101	14	10	11	100	101	100	100	100	10
microsoft public: de: vb: datenbank	1001	101	10	10	11	100	101	100	100	100	10
microsoft public: vb: crystal	1001	101	41	10	11	100	101	100	100	100	10
microsoft public: vb: com	1001	101	10	10	11	100	101	100	100	100	10
base: word: public: vb: allgemein	1001	101	10	10	11	100	101	100	100	100	10
microsoft public: windows: embedded: vb	1001	101	10	10	11	100	101	100	100	100	10



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NEWSGROUP TRACKER

Find groups where name starts with contains

Show data for the following date:

Data collected through 06/30/2003

104 Newsgroups	Posts	Posters	PPRatio	Returners	AvgLineCT	Replies	Replyers	Singles	UnRMSGs	XPosts	XPTys
1 microsoft.public.security.basics	1111	1188	18	481	38	1124	442	444	111	11	88
2 microsoft.public.dotnet.languagesvb	4872	1188	21	141	38	1411	788	808	188	814	81
3 microsoft.public.as.vb	4844	1188	18	111	41	1111	811	114	111	111	11
4 microsoft.public.de.vb	4841	1188	11	111	24	1111	411	111	11	11	41
5 microsoft.public.fr.vb	1111	111	24	118	44	1111	111	111	114	41	11
6 microsoft.public.science.basict	1118	111	11	111	38	1111	111	111	11	111	11
7 microsoft.public.vb.vbapi	1111	111	11	111	41	1111	111	111	11	111	11
8 microsoft.public.vb.database.asp	1111	111	11	111	11	1111	111	111	11	111	11
9 vb.comp.lang.basic	1111	111	11	111	11	1111	111	111	11	111	11
10 microsoft.public.access.moduleaccess	1111	111	11	111	41	1111	111	111	11	111	11
11 microsoft.public.vb.controls	1111	111	41	111	11	1111	111	111	11	111	11
12 microsoft.public.de.german.entwickler	1111	111	11	111	41	1111	111	111	11	111	11
13 autodesk.autocad.customization.vba	1111	111	11	111	11	1111	111	111	11	111	11
14 microsoft.public.word.vba.general	1111	111	41	111	41	1111	111	111	11	111	11
15 vb.comp.programming.vb	1111	111	11	111	11	1111	111	111	11	111	11
16 microsoft.public.de.vb.datenbank	1111	111	11	111	11	1111	111	111	11	111	11
17 microsoft.public.vb.crystal	1111	111	41	111	11	1111	111	111	11	111	11
18 microsoft.public.vb.com	1111	111	11	111	11	1111	111	111	11	111	11
19 baselined.public.vb.german	1111	111	11	111	11	1111	111	111	11	111	11
20 microsoft.public.windowsce.embedded.vb	1111	111	11	111	11	1111	111	111	11	111	11
21 microsoft.public.vb.syntax	1111	111	11	111	11	1111	111	111	11	111	11
22 microsoft.public.vb.database	1111	111	11	111	11	1111	111	111	11	111	11
23 microsoft.public.vb.asp.problem.vba	1111	111	11	111	11	1111	111	111	11	111	11



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NEWSGROUP TRACKER

Find groups where name starts with contains

Show data for the following date interval(s):

Data collected through 06/30/2003

Day	Week	Month of June									
104 Newsgroups	Posts	Posters	PPRatio	Returns	AvgLineCT	Replies	Replies	Length	UnRMGS	XPosts	XPTgs
microsoft public vb general discussion	1122	1122	1	100							
microsoft public dotnet languages vb	6872	1183	23	34							
microsoft public as vb	4344	374	11	122							
microsoft public de vb	4541	334	11	120							
microsoft public fr vb	2811	312	24	174							
microsoft public scripting vbscript	2114	412	28	147	38	1788	348	120	81	288	63
microsoft public vb vbnet	111	408	27	124	48	103	107	240	31	100	59
microsoft public vb database asp	1112	302	10	108	21	1787	107	288	98	273	79
pl comp lang vbnet	1888	132	11	158	18	1740	107	110	14	10	14
microsoft public access moduleaddba	1388	421	31	101	48	888	240	228	81	168	37
microsoft public vb controls	1388	332	41	112	17	108	239	288	132	171	81
microsoft public de german entwickler	1188	224	18	88	47	103	180	87	30	18	12
autodesk autocad customization .ba	1112	202	21	97	17	117	104	37	18	1	1
microsoft public word vba general	1488	448	48	92	41	120	181	181	48	88	38
tr comp programmation vb	843	114	14	88	18	108	121	40	18	14	14
microsoft public de vb datenbank	138	248	28	88	12	607	180	118	87	18	18
microsoft public vb crystal	1118	338	41	88	27	108	158	188	188	28	11
microsoft public vb com	1188	188	20	97	28	442	210	238	113	132	11
basequand public vb a gemein	1114	210	28	71	24	100	101	110	81	8	0
microsoft public windowsce embedded vb	841	238	18	88	20	182	118	110	28	87	18
microsoft public vb syntax	112	102	10	88	18	118	78	28	18	18	18
microsoft public vb database	112	238	24	87	27	288	141	188	87	118	48
microsoft public vbnet program .ba	112	111	11	88	28	108	81	118	114	28	14

Driven by posters
This is the count of the number of people who contributed one and only one message to the newsgroup in the time period selected. Sometimes referred to as drive-by posters.



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NEWSGROUP TRACKER

Find groups where term along with and

Show data for the following date interval(s):

Data collected through 08/26/2002

Day	Week	Month of June											
104 Newsgroups			Posts	Posters	PPRatio	Returners	AvgLineCT	Replies	Replyers	Singles	UNRMSGs	Reposts	APTpts
1	microsoft public vb general discussion		7424	139	1	194	35	7324	942	944	122	1	90
2	microsoft public dotnet languages vb		6972	1193	23	361	38	3620	788	808	388	834	82
3	microsoft public asp vb		6344	194	1	122	42	3873	823	384	193	101	28
4	microsoft public vb vb		4941	189	1	270	24	3880	430	297	107	78	40
5	microsoft public vb vb		2811	812	24	178	44	1888	381	218	224	88	21
6	microsoft public asp vb vb		2418	812	28	147	38	1788	348	120	81	289	83
7	microsoft public vb vb		1211	408	27	124	48	1202	107	248	82	227	68
8	microsoft public vb database asp		1111	308	30	138	81	1187	108	108	98	178	68
9	it.com.lang.vbasic		1008	138	31	108	18	1148	108	102	107	10	14
10	microsoft public access modulesdao/vb		1003	421	31	181	48	988	240	228	81	180	37
11	microsoft public vb controls		1008	828	41	112	31	808	288	378	102	113	81
12	microsoft public de german entwickler		1108	324	18	38	41	883	180	87	90	18	20
13	autodesk autocad customization vb		1102	228	27	87	27	827	184	80	78	2	7
14	microsoft public word vb general		1008	408	48	80	41	700	181	181	48	84	34
15	it.com.programiranje vb		882	124	14	88	14	788	101	40	18	1	4
16	microsoft public vb vb database		888	247	28	88	32	857	180	114	87	28	18
17	microsoft public vb vb		778	138	41	88	27	738	108	108	108	28	11
18	microsoft public vb vb com		768	388	80	87	28	642	210	107	102	102	11
19	basewind public vb vb		714	210	28	71	24	600	108	110	81	8	8
20	microsoft public windowsce embedded vb		681	128	38	88	20	582	112	110	18	87	18
21	microsoft public vb vb		682	108	10	88	18	518	118	10	10	10	10
22	microsoft public vb database		682	238	34	87	81	588	147	108	87	112	48
23	microsoft public vb vb		682	108	48	10	28	588	80	108	114	84	24


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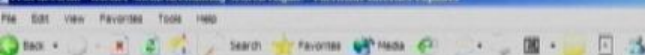
Find groups with name: or Show data for the following date:

Data collected through 08/30/2002

Day	Week	Month of June											
104 Newsgroups			Posts	Posters	PPRate	Recurance	AvgLineCT	Replies	Replies	Singles	UnMSGS	XPosts	XPTgs
1	microsoft.public.vb.general.discussion		1412	1188	18	185	38	1124					20
2	microsoft.public.dotnet.languages.vb		6872	1188	23	341	38	5433					62
3	microsoft.public.as.vb		4844	874	15	122	42	1813					23
4	microsoft.public.de.vb		4541	895	12	285	24	3870					40
5	microsoft.public.fr.vb		2811	813	24	178	44	1868					21
6	microsoft.public.accessing.vbscript		2114	412	28	147	38	1788	348	120	81	288	61
7	microsoft.public.vb.vbscript		1121	408	27	124	48	1382	327	243	82	331	68
8	microsoft.public.vb.database.asp		1712	308	30	108	81	1187	308	287	99	278	78
9	pl.comp.lang.vbasic		1888	308	35	188	18	1740	527	110	157	11	14
10	microsoft.public.access.moduleaddooba		1388	421	31	101	48	888	240	126	81	188	37
11	microsoft.public.vb.controls		1188	818	41	112	31	808	288	188	182	112	81
12	microsoft.public.de.german.entwickler		1188	324	18	88	47	881	180	87	80	18	22
13	autodesk.autocad.customization.vba		1188	328	20	88	37	877	184	87	88	8	8
14	microsoft.public.word.vba.general		1188	348	48	88	47	788	181	181	48	88	38
15	fr.comp.programm.vb		813	114	14	88	18	788	111	40	38	18	8
16	microsoft.public.de.vb.datenbank		888	248	28	88	32	807	180	114	87	18	18
17	microsoft.public.vb.crystal		778	308	41	88	27	578	178	88	188	28	11
18	microsoft.public.vb.com		788	388	80	37	38	448	218	288	188	288	11
19	basequand.public.vb.a.gemein		714	212	28	71	24	604	188	110	81	8	8
20	microsoft.public.windows.embedded.vb		811	218	38	88	80	582	114	110	81	87	18
21	microsoft.public.vb.syntax		882	188	10	88	18	714	118	78	28	78	18
22	microsoft.public.vb.database		808	238	24	87	27	588	141	188	87	112	48
23	microsoft.public.vbscript.problem.vba		812	331	44	10	38	588	85	188	114	88	28

Shared Message

This is the count of the number of messages that were shared (crossposted) to at least one other newsgroup in the time period selected.



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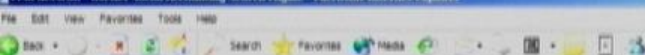
NEWSGROUP TRACKER

Find groups where there are spans with contents

Show data for the following date:

Data collected through 06/10/2002

Day	Week	Month of June											
104 Newsgroups			Posts	Posters	PPRatio	Reurnance	AvgLineCT	Replies	Repliers	Simple	UnSMDG	SPosts	SPType
microsoft public vb general discussion	7422	1399	18	434	16	6144	442	44	<div><p>newsgroups that shared messages in</p><p>This is the count of the number of newsgroups that shared messages (crosspost targets) with the selected newsgroup in the time period selected.</p></div>				
microsoft public dotnet languages vb	6972	1193	23	347	38	3420	769	67					
microsoft public asp vb	6444	974	15	322	42	3973	621	39					
microsoft public de vb	4547	797	17	270	24	3095	430	27					
microsoft public fr vb	2811	512	24	174	44	1838	391	237	114	95	57		
microsoft public scripting vbscript	2414	412	28	147	38	1768	348	110	81	289	81		
microsoft public vb vbapi	1521	408	27	124	49	1103	307	249	82	111	69		
microsoft public vb database asp	1112	200	32	709	21	1787	209	205	98	279	79		
pl comp lang vbasp	1000	199	30	168	18	1140	167	110	104	11	74		
microsoft public access moduleadapta	1000	421	31	101	48	866	240	108	81	140	37		
microsoft public vb controls	1000	828	41	112	31	678	239	189	102	173	81		
microsoft public de german entwickler	1100	324	19	38	47	993	180	97	90	39	20		
autodesk autocad customization .vb	1100	229	30	99	30	937	194	80	79	2	5		
microsoft public word vb general	1499	445	48	92	41	100	191	161	49	94	39		
tr comp programiranje vb	943	134	14	99	16	789	121	40	38	18	4		
microsoft public de vb datenbank	1000	249	29	69	32	657	180	114	87	28	18		
microsoft public vb crystal	1112	319	41	99	27	113	199	199	199	29	13		
microsoft public vb com	1000	399	20	37	30	442	210	205	100	230	11		
basiccomp public vb allgemein	1112	510	29	71	24	900	104	110	91	9	2		
microsoft public windowsce embedded vb	943	239	18	69	20	382	110	110	11	87	18		
microsoft public vb syntax	1100	110	10	99	16	410	110	110	11	11	9		
microsoft public vb database	1000	209	24	97	27	200	141	190	97	173	49		
microsoft public vbasp program .vb	800	301	48	10	28	399	80	100	104	96	34		



Address http://netscan.research.microsoft.com/default.asp



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NEWGROUP TRACKER

Find groups where name: starts with: ☐ or ☐ and

Show data for the following date: mm/yyyy:



Show Date

Data collected through 06/30/2002

Day Week Month of June

104 Newgroups	Posts	Posters	PPRatio	Returners	AvgLineCT	Replies	Repliers	Angies	UnRMSGS	XPosts	XPTgs
1 microsoft.public.de.german.lang.general	7413	1139	18	453	38	3144	842	840	222	712	80
2 microsoft.public.dotnet.languages.csharp	6872	1133	23	341	38	3422	788	808	388	834	82
3 microsoft.public.de.german.lang.general	7413	1139	18	453	38	3144	842	840	222	712	80
4 microsoft.public.de.lang	4841	881	18	289	34	2880	430	287	127	78	40
5 microsoft.public.fr.lang	2811	512	24	178	44	1838	381	238	234	88	27
6 microsoft.public.sensing.sensnet	2148	412	28	147	38	1798	348	320	81	289	61
7 microsoft.public.de.vinapi	1121	408	27	124	40	1003	327	248	82	322	58
8 microsoft.public.de.database.asp	1113	320	30	108	37	1787	308	288	99	278	59
9 pt.comp.lang.vbasic	1088	318	30	108	38	1740	328	310	101	17	74
10 microsoft.public.access.moduleadd-on	1083	421	31	101	48	888	240	328	81	182	37
11 microsoft.public.de.controls	1088	888	41	112	27	808	288	378	182	173	87
12 microsoft.public.de.german.entwickler	1088	324	18	88	47	883	182	87	80	38	22
13 autodesk.autocad.customization.de	1122	328	22	87	37	887	184	87	88	2	8
14 microsoft.public.word.doc.general	1088	408	48	88	47	180	181	187	48	88	38
15 fr.comp.programming.de	843	114	14	88	18	788	101	40	38	18	4
16 microsoft.public.de.de.database	388	287	28	88	32	807	180	114	87	28	18
17 microsoft.public.de.crystal	778	328	41	88	27	318	178	188	188	28	11
18 microsoft.public.de.com	788	388	20	87	30	442	210	338	123	332	47
19 basewind.public.de.german	714	210	28	77	24	801	100	110	81	8	0
20 microsoft.public.windowsex.embedded.de	841	238	18	88	80	382	112	130	88	87	18
21 microsoft.public.de.syntax	772	108	10	88	18	478	78	78	28	78	8
22 microsoft.public.de.database	737	238	24	87	37	280	147	188	87	173	48
23 microsoft.public.csharp.problem.de	688	381	48	10	38	388	80	180	104	88	38

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PUBLIC NEWSGROUPS: NETICAN DATA ANALYSIS

Data Analysis for	microsoft.speech.vb.general discussion	3
-------------------	----------------------------------------	---

Know data for the following date: 2/10/2004

References

Data collected through 06/30/2002 2:29:11 PM EDT

Day Week Month of Year

TIME SERIES CHART

[Chart View](#)

Real View

- ☒ Messages
- ☐ Posters
- ☐ Reviews
- ☐ Replies
- ☐ Unread Messages

REPORT CARD

THREAD TRACKER

AUTHOR TRACKER



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PUBLIC NEWSGROUPS: NETSCAN DATA ANALYSIS

Data Analysis for	microsoft.speech.vb.general discussion	1
-------------------	----------------------------------------	---

Show data for the following date:

Full source: <http://www.cba.gov.au>

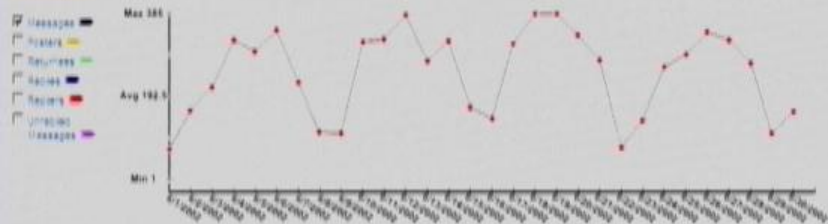
Data collected through 06/30/2007 14:24:23.000

Day	Week	Month of June
-----	------	---------------

TIME SERIES CHART

[Chart View](#)

DAY VIEW



REPORT CARD

	Change from Prior	This Period	Rank - NewsGroups	Daily Average
Messages	-2%	747	780	247
Avg Msg Length	-7%	36 Lines	780	
People	-12%	1300 People	780	24
...

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PUBLIC NEWSGROUPS: NETSCAN DATA ANALYSIS

Case analysis for	microsoft.sushilv@gmail.com	1
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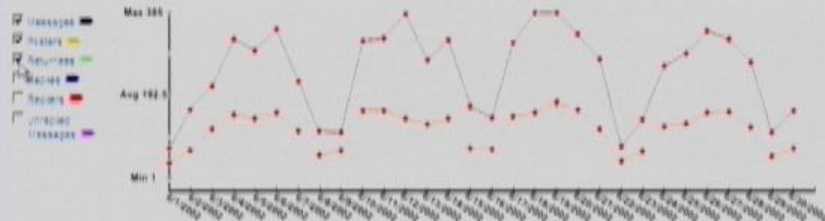
View data for the following date: 08/31/2012  [View Data](#) Data collected through 08/30/2012 [Load Data](#)

Day	Week	Identity of Juror
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TIME SERIES CHART

[Chart View](#)

ĐẠI VIÊN



REPORT CARD

	Change from Prior	This Period	Rank, NewsGroups	Daily Average
Messages	-2.1%	7433	782	247
Avg Msg Length	-17.5%	38 Lines	782	
People	-12.1%	1355 People	782	48
Newsgroups	0.0%	100 Newsgroups	782	1



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PUBLIC NEWSGROUPS: NETSCAN DATA ANALYSIS

Data Analysis for:

Show data for the following date:

[Show Data](#)

Data collected through 06/30/2002 23:42:42

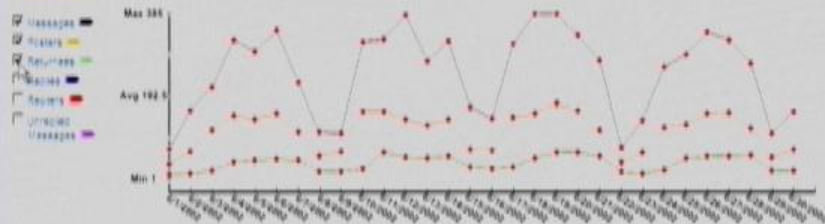
☐ Day ☐ Week ☒ Month of June

TIME SERIES CHART

[Chart View](#)

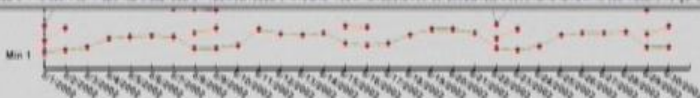
[Bar View](#)

06/01/02 2:43:19



REPORT CARD

	Change from Prior	This Period	Rank: NewsGroups	Daily Average
Messages	-2.5%	7433	780	247
Avg Msg Length	-7.5%	35 Lines	780	
People	-12.5%	1295 People	780	41
Replies	3.5%	165 Replies	780	46



REPORT CARD

	Change from Prior	This Period	Rank - Newsgroups	Daily Average
Messages	-2 %	7433	780	317
Avg Msg Length	-1 %	28 Lines	780	
People	-12 %	1293 People	780	46
Returnees	7 %	460 Returnees	780	16
Repliers	-9 %	602 Repliers	780	23
% Posters	-12 %	644 People	780	21
Interactivity				
Replies	3 %	6624	780	164
Unreplied Messages	-20 %	553	780	7
Neighbor Newsgroups	Newsgroups Shared Messages % Shared			
Total Neighbors	54			
#1 Neighbor	comp.lang.c++.faq.100			
#2 Neighbor	microsoft.public.virus.control			
#3 Neighbor	microsoft.public.virus.activex			
#4 Neighbor	microsoft.public.virus.mcafee			
#5 Neighbor	microsoft.public.virus.mcafee			
#6 Neighbor	microsoft.public.virus.mcafee			

THREAD TRACKER

No	Subject Line	Posts in This Period	Total Posts	Thread Age in Days
1	XTree.exe - A Wooden Tower - Microsoft User Needs 2K Building	108	118	12
2	XTree.exe - XTree.exe will fail - file wrong	16	16	1
3	XTree.exe - XTree.exe fails to run	16	16	5
4	XTree.exe - XTree.exe?	27	27	4
5	XTree.exe - XTree.exe user (XTree.exe) group user - Zommaria?	42	42	11
6	XTree.exe - XTree.exe...	11	11	1

Address	http://research.microsoft.com/reportcard.asp?searchTerm=VBSearch%20with%20VBCode%202002&id=12424&idname=microsoft.public.vb.general.discussion		
http://research.microsoft.com/reportcard.asp?searchTerm=VBSearch%20with%20VBCode%202002&id=12424&idname=microsoft.public.vb.general.discussion	109	2.2 %	
http://research.microsoft.com/reportcard.asp?searchTerm=VBSearch%20with%20VBCode%202002&id=12424&idname=microsoft.public.vb.general.discussion	01	1.2 %	
http://research.microsoft.com/reportcard.asp?searchTerm=VBSearch%20with%20VBCode%202002&id=12424&idname=microsoft.public.vb.general.discussion	00	1.2 %	

THREAD TRACKER

No	Subject Line	Posts in This Period	Total Posts	Thread Age in Days
1	X Thread: X Windows From: Microsoft Windows On-Boarding	108	108	12
2	X Thread: X Help on IIS Fail: Line wrong	88	88	3
3	X Thread: X Why does it take 10	88	88	9
4	X Thread: X Help with	87	87	4
5	X Thread: X Has anyone used VB help in the group yet? Comment?	86	86	11
6	X Thread: X Resolving printer mapping	86	86	8
7	X Thread: X Troubleshooting help system	87	87	5
8	X Thread: X Troubleshooting help	87	87	18
9	X Thread: X Microsoft SQL Server Has anyone used VB help in the group yet? Comment?	83	83	8
10	X Thread: X How many lines in a program	83	83	10
11	X Thread: X How can you use VB to get information from	83	83	11
12	X Thread: X Saving events and settings	87	87	3
13	X Thread: X How to get VB code	88	88	2
14	X Thread: X Changing functions	88	88	2
15	X Thread: X Customizing Explorer	84	84	7
16	X Thread: X Searching responses	84	84	4
17	X Thread: X Using ASP 2000	83	83	10
18	X Thread: X A helpful way to write code	83	83	4
19	X Thread: X VB include statements	82	82	3
20	X Thread: X Software design using VB 2000	82	82	8
21	X Thread: X VB application Office 2000 installer	82	82	8
22	X Thread: X VB 2000 questions	81	81	2
23	X Thread: X VB 2000 questions	81	81	8

http://research.microsoft.com/reportcard.asp?SearchType=12123SearchWords=Virus&Date=06-30-2002&Word=12614&OfName=Microsoft&Page=1&GeneralDiscussion				Go
W3 neighbor	http://research.microsoft.com/reportcard.asp?SearchType=12123SearchWords=Virus&Date=06-30-2002&Word=12614&OfName=Microsoft&Page=1&GeneralDiscussion	104	0%	
W4 neighbor	http://research.microsoft.com/reportcard.asp?SearchType=12123SearchWords=Virus&Date=06-30-2002&Word=12614&OfName=Microsoft&Page=1&GeneralDiscussion	91	1.2%	
W5 neighbor	http://research.microsoft.com/reportcard.asp?SearchType=12123SearchWords=Virus&Date=06-30-2002&Word=12614&OfName=Microsoft&Page=1&GeneralDiscussion	90	1.2%	

THREAD TRACKER

No Subject Line	Posts in This Period	Total Posts	Thread Age in Days
1 KTras view X Wordlan Forum: Microsoft User Needs On X-wing	104	104	12
2 Microsoft X Help on X-101 Part 1: Line wrong	95	95	1

☒ Tree view ☐ Single Post ☒ Most Posts ☐ Regular Post



The page cannot be displayed

There is a problem with the page you are trying to reach and it cannot be displayed.

Please try the following:

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- Click the Refresh button, or try again later.
- Click the Search to look for information on the Internet.
- You can also see [a list of related areas](#).

HTTP/500 : Internal server error
Internet Explorer

#0 Neighbor	http://www.research.microsoft.com/reports/rdm/ThreadTracker.asp?ThreadID=613102&ThreadName=MSN&Date=06/20/2002&UID=613102+MSN&Email=msn@msn.com&GeneralDiscussion=1	104	1.2 %
#4 Neighbor	http://www.research.microsoft.com/reports/rdm/ThreadTracker.asp?ThreadID=613102&ThreadName=MSN&Date=06/20/2002&UID=613102+MSN&Email=msn@msn.com&GeneralDiscussion=1	91	1.2 %
#6 Neighbor	http://www.research.microsoft.com/reports/rdm/ThreadTracker.asp?ThreadID=613102&ThreadName=MSN&Date=06/20/2002&UID=613102+MSN&Email=msn@msn.com&GeneralDiscussion=1	90	1.2 %

THREAD TRACKER

No	Subject Line	Posts in This Period	Total Posts	Thread Age in Days
1	K Tree view K Windows Explorer - Windows XP - Slowing	104	104	12
2	K Tree view K Help - My XP - The missing	69	69	1
3	K Tree view K Why doesn't it work	59	59	9
4	K Tree view K Security?	57	57	4
5	K Tree view K Has anyone used VB .Net in the group yet - Denmark?	48	48	11
6	K Tree view K Reopening another machine	36	36	5
7	K Tree view K Fixing some - my system	37	37	5
8	K Tree view K Tuxedo installation	37	37	10
9	K Tree view K Windows XP - Has anyone used VB .Net in the group yet - Denmark?	33	33	5
10	K Tree view K How many times in a program	33	33	10
11	K Tree view K You see what the GUI is getting better and better	33	33	11
12	K Tree view K Saving accounts and settings	27	27	3
13	K Tree view K I had to try USB device	27	27	2
14	K Tree view K Installing functions	28	28	2
15	K Tree view K User program compiler	24	24	7
16	K Tree view K Searching lessons	24	24	4
17	K Tree view K I have a problem with	23	23	37
18	K Tree view K A better way to write to file	23	23	4
19	K Tree view K USB mouse and keyboard	22	22	5
20	K Tree view K Software design - integrating orange	22	22	7
21	K Tree view K VB and some other 2000 installer	22	22	6
22	K Tree view K 2000 questions	21	21	5
23	K Tree view K A question about Windows	21	21	6

AUTHOR TRACKER

NO	Posters	Posts	Replies	This Period	Last Period	First Seen	Last Seen	Threads Touched	Threads Initiated	Other NQs
1	R_santana@unimelb.edu.au	141	140	30	31	19.08.1999	27.08.2002	34	1	18
2	R_jiang@unimelb.edu.au	139	137	29	40	08.01.2002	27.08.2002	49	1	12
3	R_fan_nam@unimelb.edu.au	101	101	37	33	14.08.2001	27.08.2002	109	0	19
4	R_lee@unimelb.edu.au	149	149	30	39	14.08.2001	27.08.2002	112	0	14
5	R_lee@unimelb.edu.au	103	101	22	0	07.08.2001	27.08.2002	83	0	12
6	R_zhang@unimelb.edu.au	84	84	22	24	12.02.2000	27.08.2002	88	0	8
7	R_huang@unimelb.edu.au	80	79	22	7	01.05.2002	27.08.2002	49	1	17
8	R_zhang@unimelb.edu.au	149	144	21	8	08.08.2002	27.08.2002	64	8	28
9	R_fish@unimelb.edu.au	142	142	20	13	08.12.2001	27.08.2002	128	0	12
10	R_zhang@unimelb.edu.au	212	207	23	22	19.08.1999	27.08.2002	188	0	19
11	R_zhang@unimelb.edu.au	43	40	20	22	14.08.2001	27.08.2002	30	0	0
12	R_zhang@unimelb.edu.au	90	90	20	4	08.04.1999	27.08.2002	88	0	27
13	R_lee@unimelb.edu.au	82	82	20	18	08.03.2001	27.08.2002	32	0	3
14	R_zhang@unimelb.edu.au	88	88	19	28	02.11.2002	27.08.2002	38	0	17
15	R_lee@unimelb.edu.au	83	83	18	22	11.08.2001	27.08.2002	37	0	0
16	R_fish@unimelb.edu.au	37	32	18	14	12.18.2001	27.08.2002	22	1	0
17	R_fish@unimelb.edu.au	78	74	17	17	01.08.2002	08.08.2002	83	1	17
18	R_jiang@unimelb.edu.au	84	84	17	28	27.01.2001	27.08.2002	82	0	12
19	R_zhang@unimelb.edu.au	87	88	17	28	28.08.2001	27.08.2002	48	1	12
20	R_fish@unimelb.edu.au	22	22	16	3	08.10.2002	27.08.2002	8	0	28
21	R_lee@unimelb.edu.au	27	27	16	11	02.08.2000	27.08.2002	24	0	12
22	R_zhang@unimelb.edu.au	33	32	16	12	02.01.2000	27.08.2002	19	8	7
23	R_zhang@unimelb.edu.au	81	49	15	12	02.10.2002	27.08.2002	44	4	8
24	R_zhang@unimelb.edu.au	81	80	16	1	08.03.2002	27.08.2002	30	0	4

AUTHOR TRACKER

NO	Posters	Posts	Replies	This Period	Last Period	First Seen	Last Seen	Threads Touched	Threads Initiated	Other NGs
1	X XTree view X Can't do a system RESTART	141	140	10	51	09-08-1999	07-08-2002	33	-	11
2	X XTree view X Where does VB look for DLL	100	107	29	90	07-07-2000	07-08-2002	30	-	13

XTree view

		Total Posts	Posts by Author	Posters	Initiated by Author
1	XTree view X Can't do a system RESTART	8	8	2	1
2	XTree view X Where does VB look for DLL	10	3	4	1
3	XTree view X Creating shortcut file, is this true??	14	3	3	1
4	XTree view X How to use the TabStrip control better	18	3	7	1
5	XTree view X Find a File - Quickie	7	3	4	1
6	XTree view X Accelerator keys on old VB Menus	6	2	2	1
7	XTree view X Locality?	69	2	27	1
8	XTree view X Microsoft Bully Boy Has anyone used VB.Net in this group yet - Comments?	33	2	26	1
9	XTree view X String problems (too long)	7	2	5	1
10	XTree view X How to connect to Jet 4.0	9	2	9	1

1	X XTree view X Can't do a system RESTART	141	140	10	51	09-08-1999	07-08-2002	33	-	11
2	X XTree view X Where does VB look for DLL	100	107	29	90	07-07-2000	07-08-2002	30	-	13
3	X XTree view X Creating shortcut file, is this true??	14	10	3	3	07-08-2001	07-08-2002	31	2	11
4	X XTree view X How to use the TabStrip control better	18	14	3	24	12-02-2000	07-08-2002	27	3	9
5	X XTree view X Find a File - Quickie	7	59	3	7	01-10-2001	07-08-2002	49	-	14
6	X XTree view X Accelerator keys on old VB Menus	6	148	21	5	07-08-2001	07-08-2002	34	2	20
7	X XTree view X Locality?	69	143	20	13	06-11-2001	07-08-2002	100	2	11
8	X XTree view X Microsoft Bully Boy Has anyone used VB.Net in this group yet - Comments?	33	212	20	22	09-08-1999	07-08-2002	100	2	19
9	X XTree view X String problems (too long)	7	40	20	32	04-08-2001	07-08-2002	30	2	9
10	X XTree view X How to connect to Jet 4.0	9	90	20	4	08-04-1999	07-08-2002	27	2	21
11	X XTree view X Can't do a system RESTART	8	60	20	13	07-03-2001	07-08-2002	32	3	3
12	X XTree view X Where does VB look for DLL	10	60	19	28	02-11-2001	07-08-2002	38	2	11
13	X XTree view X Creating shortcut file, is this true??	14	81	19	22	11-08-2001	07-08-2002	27	2	9

AUTHOR TRACKER

NO	Posters	Posts	Replies	This Period	Last Period	First Seen	Last Seen	Threads Touched	Threads Initiated	Other NGs
1	E. J. Santoro	141	140	30	11	12-04-1999	07-09-2002	86	1	16
2	D. J. G. (D. J. G.)	100	97	49	40	08-01-2000	07-09-2002	80	1	19

NO	Thread Subject	Total Posts	Posts by Author	Posters	Initiated by Author
1	XTree view X Can to do a system RESTART?	5	3	2	•
2	XTree view X Where does VB look for DLL	10	3	4	•
3	XTree view X Creating shortcut file, is this true??	14	3	5	•
4	XTree view X How to use the TabStrip control better?	19	3	7	•
5	XTree view X Find a File - Quickie	7	2	4	•
6	XTree view X Accelerator keys on old VB Menus	6	2	5	•
7	XTree view X natively?	61	2	27	•
8	XTree view X Microsoft Bully Boy Has anyone used VB Net in this group yet - Comments?	53	2	26	•
9	XTree view X String problems (too long)	7	2	5	•
10	XTree view X How to connect to Jet 4.0	3	2	3	•

[illegible]



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NEWSGROUP TRACKER

Find groups where name C starts with Φ contains Φ is C is

资料来源: 占梅编, 1977; 田中, 1978; 田中、山田、占梅编, 1979; 田中、山田、占梅, 1980。

1744






References

2004

References

Adjustments and ...

888 744-4444

Pages	Proxers	BBRate	BanRate	AntiTrust	Rating	Replies	Singles	UnRMSes	IPosts	XPT
17					173	1550	1719	1447	1702	17
18						163	1520	1690	1712	169
19					157	1527	1742	1770	1770	170
20					133	1503	1600	1617	1642	167
21	FISH NetScan - Usenet Social Accounting Search En...				147	1502	1502	1604	1602	170
22					157	1500	1610	1600	1610	167
23	1602	17	160	14	1619	161	1608	1600	1610	169
24	1607	1603	16	133	16	1602	160	1602	160	160
25	1610	1600	16	140	16	1600	160	1600	160	160
26	1610	1600	16	140	16	1600	160	1600	160	160
27	1610	1600	16	140	16	1600	160	1600	160	160
28	1610	1600	16	140	16	1600	160	1600	160	160
29	1610	1600	16	140	16	1600	160	1600	160	160
30	1610	1600	16	140	16	1600	160	1600	160	160
31	1610	1600	16	140	16	1600	160	1600	160	160
32	1610	1600	16	140	16	1600	160	1600	160	160
33	1610	1600	16	140	16	1600	160	1600	160	160
34	1610	1600	16	140	16	1600	160	1600	160	160
35	1610	1600	16	140	16	1600	160	1600	160	160
36	1610	1600	16	140	16	1600	160	1600	160	160
37	1610	1600	16	140	16	1600	160	1600	160	160
38	1610	1600	16	140	16	1600	160	1600	160	160
39	1610	1600	16	140	16	1600	160	1600	160	160
40	1610	1600	16	140	16	1600	160	1600	160	160
41	1610	1600	16	140	16	1600	160	1600	160	160
42	1610	1600	16	140	16	1600	160	1600	160	160
43	1610	1600	16	140	16	1600	160	1600	160	160
44	1610	1600	16	140	16	1600	160	1600	160	160
45	1610	1600	16	140	16	1600	160	1600	160	160
46	1610	1600	16	140	16	1600	160	1600	160	160
47	1610	1600	16	140	16	1600	160	1600	160	160
48	1610	1600	16	140	16	1600	160	1600	160	160
49	1610	1600	16	140	16	1600	160	1600	160	160
50	1610	1600	16	140	16	1600	160	1600	160	160



NEWGROUP TRACKER

Find groups where name starts with and ends with

Show data for the following date:

Show Data

Data was last updated through 06/30/2002

☐ Day |
 ☐ Week |
 ☒ Month of

RR Newsgroups	Spam	Dealers	DBData	Genomus	Avn/Ina/T	Bodies	Replies	Singles	UnRMSGS	XPosts	XPT
microsoft public windowxp general	11					119	1590	1919	1441	103	11
microsoft public windowxp help_and_su	12					160	1320	2060	1710	1166	94
microsoft public es windowxp	8					117	427	742	237	170	28
microsoft public fr windowxp	8					110	983	100	437	242	47
microsoft public windowxp hardware	4					145	557	1200	494	403	10
microsoft public windowxp basics	4					119	779	76	160	671	67
microsoft public windowxp newusers	4517	160	17	189	24	2028	166	1089	288	231	29
microsoft public windowxp network_web	4157	1000	45	111	18	2460	768	1282	888	182	18
microsoft public de german windowxp s	1017	170	27	245	21	2090	894	894	160	215	21
microsoft public windowxp perform_mai	3190	1070	41	140	38	2000	579	930	176	210	22
ma-nova pl windowxp	2010	160	24	227	18	2120	470	336	160	60	20
microsoft public windowxp setup_depic	2017	1070	41	88	28	1860	470	700	274	148	18
microsoft public windowxp security_ad	2010	1070	41	88	31	1881	470	700	274	148	18
microsoft public windowxp customize	2010	1070	41	88	31	1881	470	700	274	148	18
microsoft public windowxp games	1017	170	27	245	21	2090	894	894	160	215	21
microsoft public de german windowxp h	1017	170	27	245	21	2090	894	894	160	215	21
microsoft public windowxp messenger	1017	170	27	245	21	2090	894	894	160	215	21
microsoft public nl windowxp	1017	170	27	245	21	2090	894	894	160	215	21
microsoft public nl windowxp and	1017	170	27	245	21	2090	894	894	160	215	21



1. The first case refers to a 45-year-old male. 2. The following table shows the results of the analysis.

Find

show data

author # of points

alt.politics.bush

May of 2002

points per thread

author	# of points
1. [redacted]	201,111.01
2. [redacted]	187,071.0
3. [redacted]	17,897.20
4. [redacted]	16,147
5. [redacted]	15,000
6. [redacted]	14,000
7. [redacted]	13,000
8. [redacted]	12,000
9. [redacted]	11,000
10. [redacted]	10,000
11. [redacted]	9,000
12. [redacted]	8,000
13. [redacted]	7,000
14. [redacted]	6,000
15. [redacted]	5,000
16. [redacted]	4,000
17. [redacted]	3,000
18. [redacted]	2,000
19. [redacted]	1,000
20. [redacted]	1,000
21. [redacted]	1,000
22. [redacted]	1,000
23. [redacted]	1,000
24. [redacted]	1,000
25. [redacted]	1,000
26. [redacted]	1,000
27. [redacted]	1,000
28. [redacted]	1,000
29. [redacted]	1,000
30. [redacted]	1,000
31. [redacted]	1,000
32. [redacted]	1,000
33. [redacted]	1,000
34. [redacted]	1,000
35. [redacted]	1,000
36. [redacted]	1,000
37. [redacted]	1,000
38. [redacted]	1,000
39. [redacted]	1,000
40. [redacted]	1,000
41. [redacted]	1,000
42. [redacted]	1,000
43. [redacted]	1,000
44. [redacted]	1,000
45. [redacted]	1,000
46. [redacted]	1,000
47. [redacted]	1,000
48. [redacted]	1,000
49. [redacted]	1,000
50. [redacted]	1,000

2 *Ex. 11.10* Let $\mathbf{A} = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \\ 3 & 4 & 5 \end{bmatrix}$. *Answer:* $\det \mathbf{A} = 0$.

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10-01 City Council, Feb. 8, 2000
 10-02 City Council, Feb. 8, 2000

alt.politics.bush
May of 2002

[illegible]

1

1. The top 100 e-mail addresses in the 2002 election

2002

2

2. The top 100 e-mail addresses in the 2002 election

2002

all politics, bush May of 2002

top 100 e-mail addresses in the 2002 election

1. The top 100 e-mail addresses in the 2002 election

2. The top 100 e-mail addresses in the 2002 election

3. The top 100 e-mail addresses in the 2002 election

4. The top 100 e-mail addresses in the 2002 election

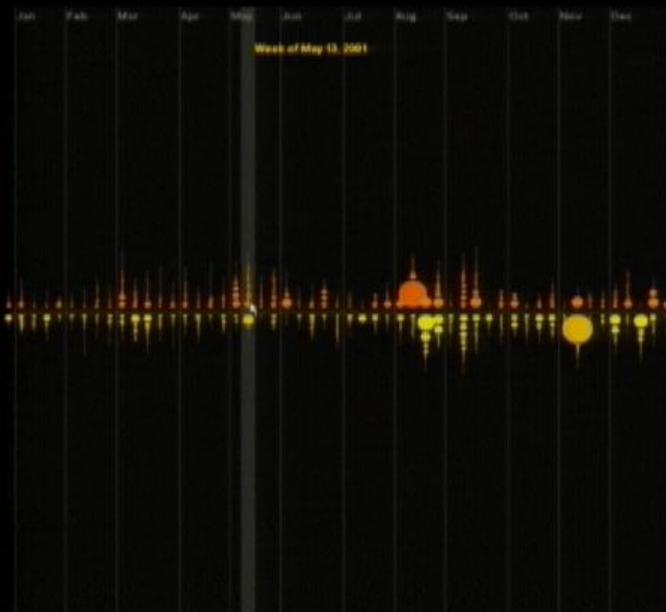
5. The top 100 e-mail addresses in the 2002 election

points per hour

email	# of points
1. [redacted]	200,000
2. [redacted]	150,000
3. [redacted]	100,000
4. [redacted]	80,000
5. [redacted]	70,000
6. [redacted]	60,000
7. [redacted]	50,000
8. [redacted]	40,000
9. [redacted]	30,000
10. [redacted]	20,000
11. [redacted]	15,000
12. [redacted]	10,000
13. [redacted]	8,000
14. [redacted]	7,000
15. [redacted]	6,000
16. [redacted]	5,000
17. [redacted]	4,000
18. [redacted]	3,000
19. [redacted]	2,000
20. [redacted]	1,500
21. [redacted]	1,000
22. [redacted]	800
23. [redacted]	700
24. [redacted]	600
25. [redacted]	500
26. [redacted]	400
27. [redacted]	300
28. [redacted]	200
29. [redacted]	150
30. [redacted]	100
31. [redacted]	80
32. [redacted]	70
33. [redacted]	60
34. [redacted]	50
35. [redacted]	40
36. [redacted]	30
37. [redacted]	20
38. [redacted]	15
39. [redacted]	10
40. [redacted]	8
41. [redacted]	7
42. [redacted]	6
43. [redacted]	5
44. [redacted]	4
45. [redacted]	3
46. [redacted]	2
47. [redacted]	1
48. [redacted]	1
49. [redacted]	1
50. [redacted]	1
51. [redacted]	1
52. [redacted]	1
53. [redacted]	1
54. [redacted]	1
55. [redacted]	1
56. [redacted]	1
57. [redacted]	1
58. [redacted]	1
59. [redacted]	1
60. [redacted]	1
61. [redacted]	1
62. [redacted]	1
63. [redacted]	1
64. [redacted]	1
65. [redacted]	1
66. [redacted]	1
67. [redacted]	1
68. [redacted]	1
69. [redacted]	1
70. [redacted]	1
71. [redacted]	1
72. [redacted]	1
73. [redacted]	1
74. [redacted]	1
75. [redacted]	1
76. [redacted]	1
77. [redacted]	1
78. [redacted]	1
79. [redacted]	1
80. [redacted]	1
81. [redacted]	1
82. [redacted]	1
83. [redacted]	1
84. [redacted]	1
85. [redacted]	1
86. [redacted]	1
87. [redacted]	1
88. [redacted]	1
89. [redacted]	1
90. [redacted]	1
91. [redacted]	1
92. [redacted]	1
93. [redacted]	1
94. [redacted]	1
95. [redacted]	1
96. [redacted]	1
97. [redacted]	1
98. [redacted]	1
99. [redacted]	1
100. [redacted]	1

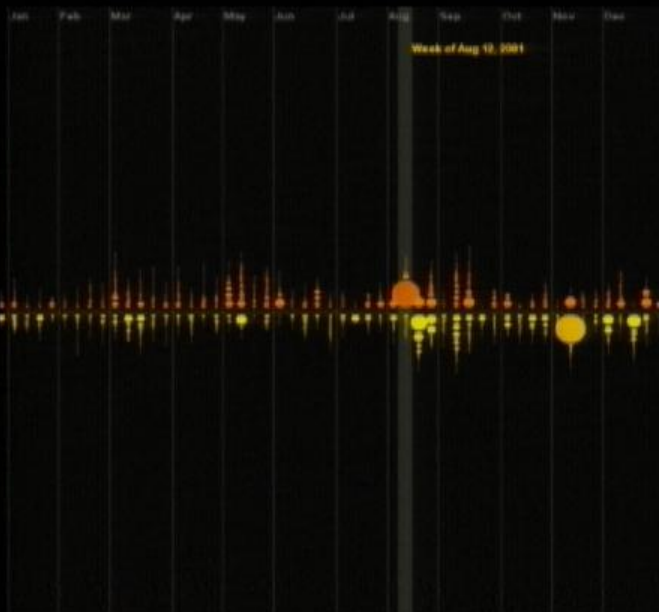
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Source: <http://www.irs.gov/efile>



tracks not indexed by author

tracks not indexed by author



subject	# of points
Week of Aug 12, 2001	10
Week of Aug 12, 2001	8
Week of Aug 12, 2001	7
Week of Aug 12, 2001	7
Week of Aug 12, 2001	7
Week of Aug 12, 2001	6
Week of Aug 12, 2001	5
Week of Aug 12, 2001	4
Week of Aug 12, 2001	3
Week of Aug 12, 2001	2
Week of Aug 12, 2001	1
Week of Aug 12, 2001	1

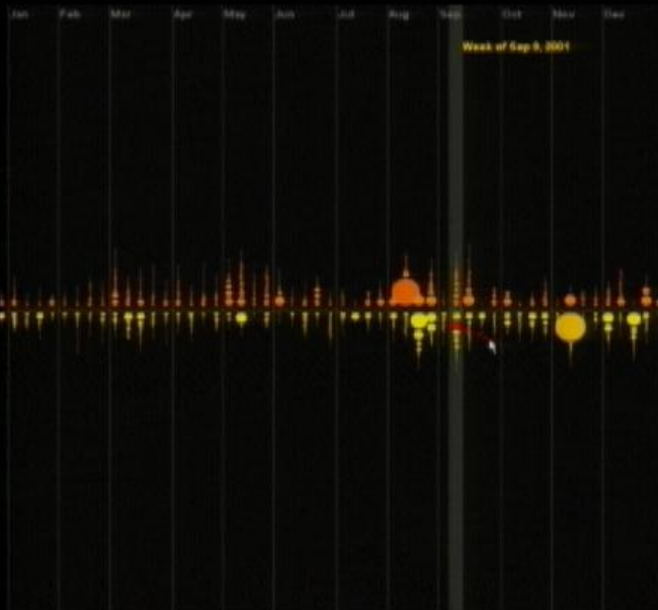
subject	# of points
Week of Aug 12, 2001	5
Week of Aug 12, 2001	4
Week of Aug 12, 2001	4
Week of Aug 12, 2001	3
Week of Aug 12, 2001	3
Week of Aug 12, 2001	2
Week of Aug 12, 2001	2
Week of Aug 12, 2001	1
Week of Aug 12, 2001	1
Week of Aug 12, 2001	1

[Home](#)
[giantant@defiant.com](#)

[Back to messagegroups](#)

[Images indexed by author](#)

[Images not indexed by author](#)



subject	# of posts
ambles over?	1
high managers	1
CDNY	4
don't know - measure	4
don't know - measure	4
what's that?	4
Push Loughborough	3
Chapman and of so...	2
and	2
early morning music	1
Long Mountain House	1
in groups before	1
Quaker	1
Great Fun	1

subject	# of posts
and that's the answer	10
A little which will be...	9
From a perspective of...	8
Land's end to benefit	7
and so then between	6
Judge's Point of view	5
Quaker Populism	2
Land's end to benefit	2
Push and that's the...	2
and... wouldn't it be...	1
Chapman and of so...	1
O'Flaherty's	1
and that's the... A...	1
Remember - Lough...	1

Keywords: *Acute stress disorder*; *Posttraumatic stress disorder*; *Posttraumatic growth*; *Posttraumatic stress*

Source: U.S. Census Bureau, 1997.

The bubble chart displays the number of new cases by month and age group. The x-axis represents months from Jan to Dec. The y-axis represents the number of cases, with a scale from 0 to 1000. Bubbles are colored by age group: 0-4 (blue), 5-14 (orange), 15-24 (green), 25-34 (red), 35-44 (purple), 45-54 (brown), 55-64 (pink), 65-74 (gray), 75-84 (light blue), 85+ (light orange). The chart shows a significant peak in cases for the 25-34 age group in June, reaching nearly 1000 cases. Other age groups show smaller peaks or remain relatively stable throughout the year.

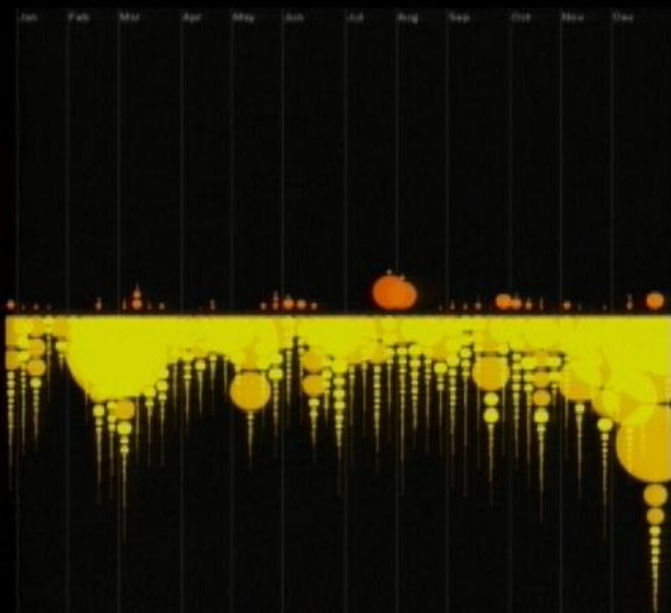
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Source: U.S. Census Bureau, 1997.

Week of Nov 18, 2001

subject	# of points
Algebra	1

[illegible]

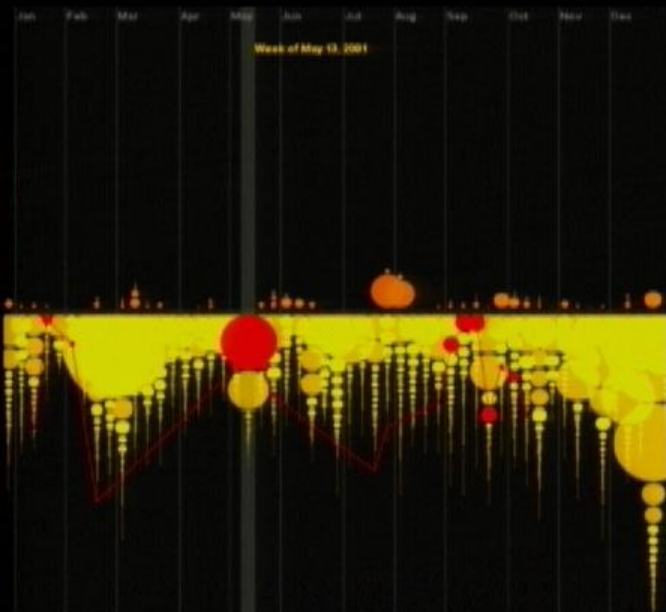


subject: 1 of 1000

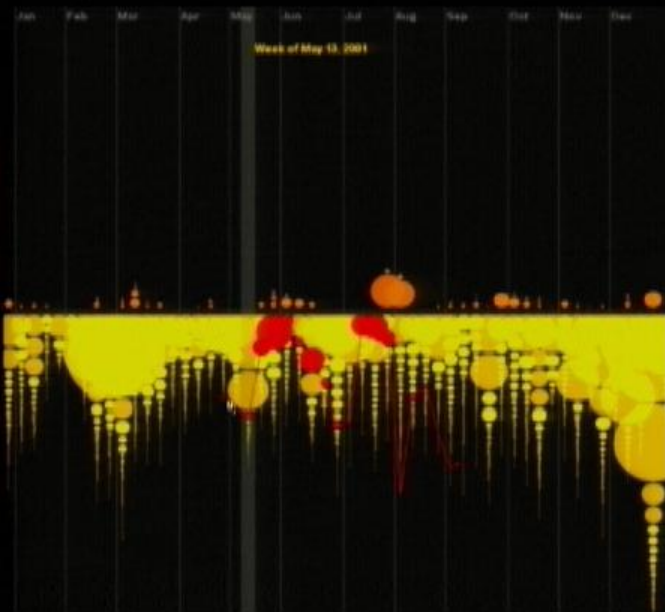
10/10/2004 1:00 PM

Copyright © 2004 by John Wiley & Sons, Inc.

Source: <http://www.fishbase.org>

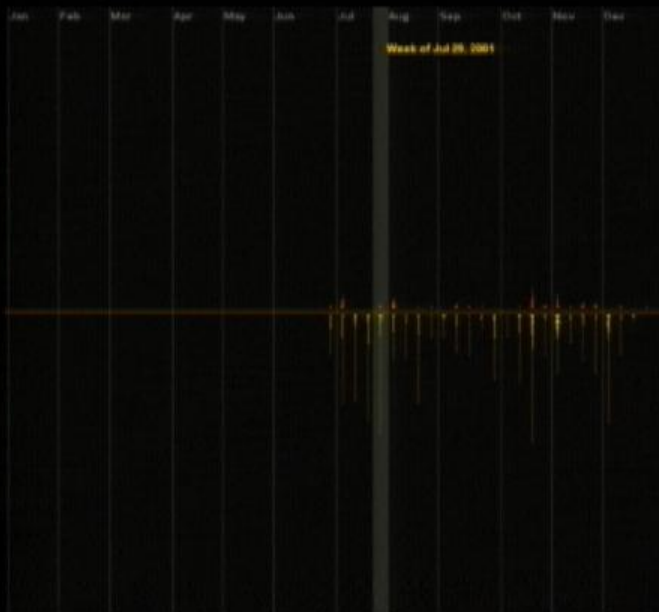


Artist	Album	Label	Weeks on chart	Peak position
James Brown	James Brown	A&M	16	1
10. GUNSHIP	Gunship	Mercury	15	1
11. ANASTASIA	Not That Sharp	Capitol	15	1
12. JAY-Z	The Black Album	Roc-A-Fella	15	1
13. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
14. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
15. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
16. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
17. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
18. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
19. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1
20. THE NOTORIOUS B.I.G.	Mezzanotte	Atlantic	15	1

[illegible]

[subject] # off alpha

	Number	% of total
Male	60	78.9
Female	16	21.1
Total	76	100

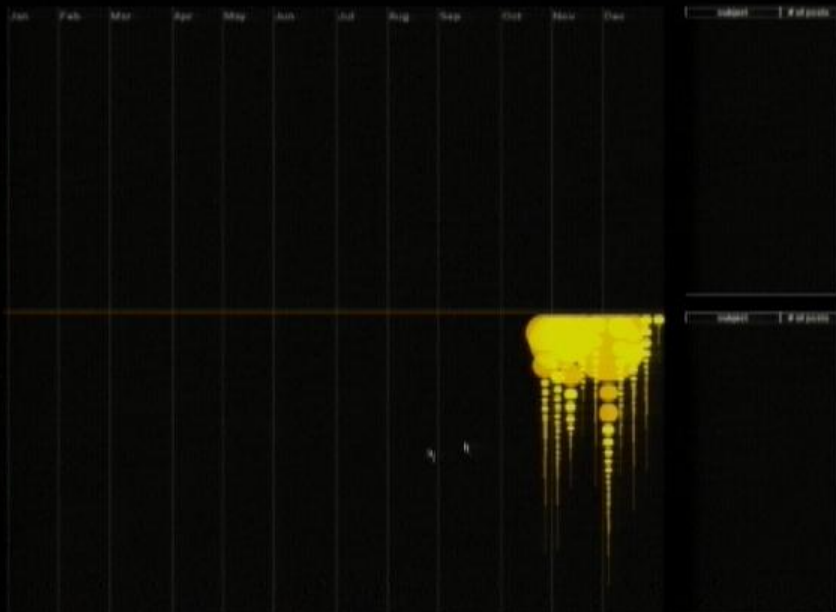


subject	# of posts
Screen - make with...	2
Are you reading now...	1

subject	# of posts
single dimensions...	1
Waiting around when...	1
How do I make the...	1
How on top people...	1
How to make the 100...	1
Windows ME, the...	1
Windows 95, the...	1
Subject Open Files...	1
1 Point with Form...	1
Bag in Cutting Fan...	1
What are the main...	1
Photograph...	1
How can I find out...	1
How to make the...	1
Presenting users &	1
Separate user, jobs...	1
Distributing cards...	1
will be better...	1
0 00 to 100 00 Test...	1
LOHAW - Make it a...	1
Using a Form...	1
Customs Form User...	1
asked with some...	1
Form 2.0 with 100...	1
in 100 000 Range...	1

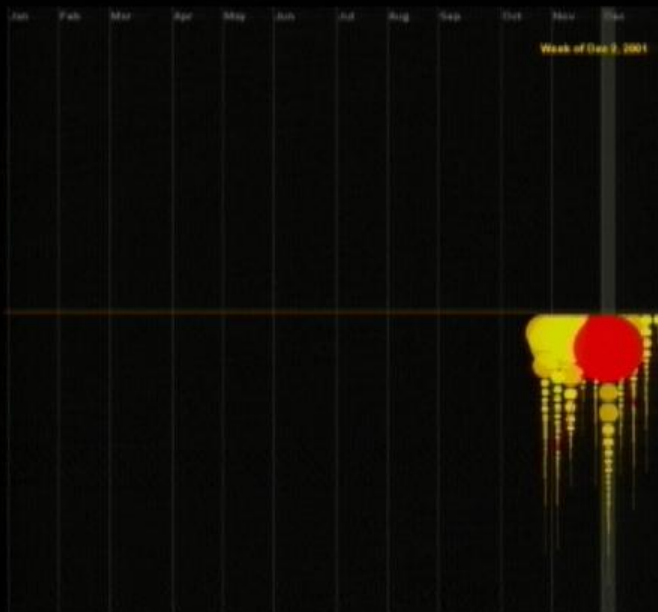
अनुसंधानकर्ता: श्री सुधाकराजी काकादेराजे, दारासाहेब फर्के

Source: the 1992 questionnaire survey responses.



[illegible]

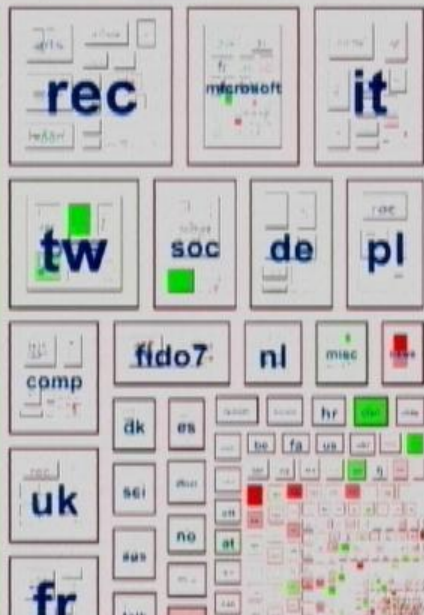
Source: <http://www.irs.gov>



Topic	# of people
Admission to a Vesp.	0.1
Admission to the theatre	0.2
Post the program	1.0
Three who spoke	1.0
Information during a	1.4
Prayer time and the	1.4
through Prayers brother	1.8
Prayers in a Vesp.	1.8
Five questions asked	2
Information on him	2
My contribution on	2
Prayers of the church	2
and Prayers a lot for	2
all right with them	2
about the Prayers	2
Prayers, Prayers, Prayers	2
attention	4
Prayers & Prayers Great	4
The Bible and the	3
Attention Vesp.	3
Prayers should be	3
Prayers should be	3
The necessity of at	2
the attention	2
Prayers Prayers, Prayers	2

All of Usenet Tree Map Visualization

November 2001



All of Usenet Tree Map Visualization

November 2001



Microsoft.Public.*
June 2001

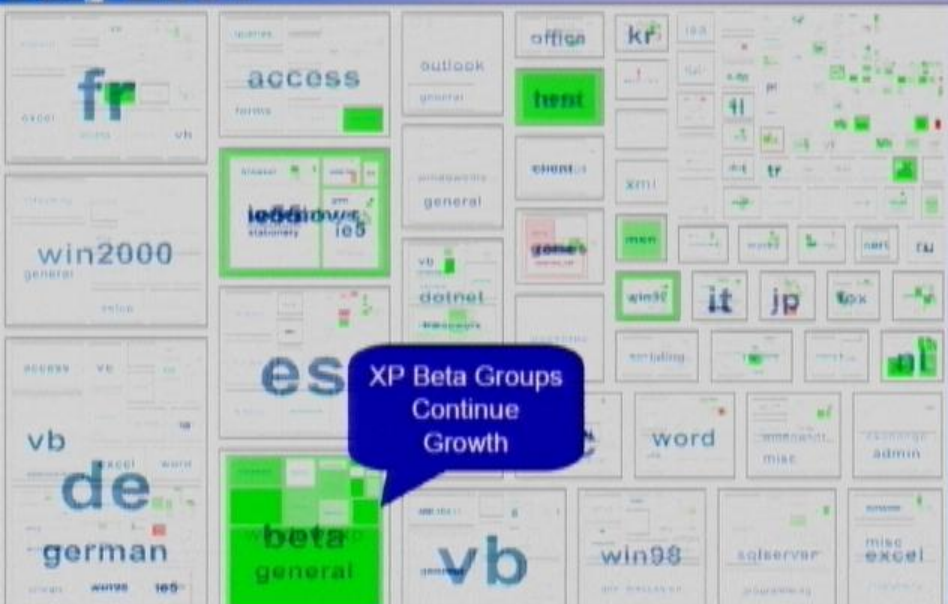


Microsoft.Public.*
June 2001



Microsoft.Public.*

July 2001

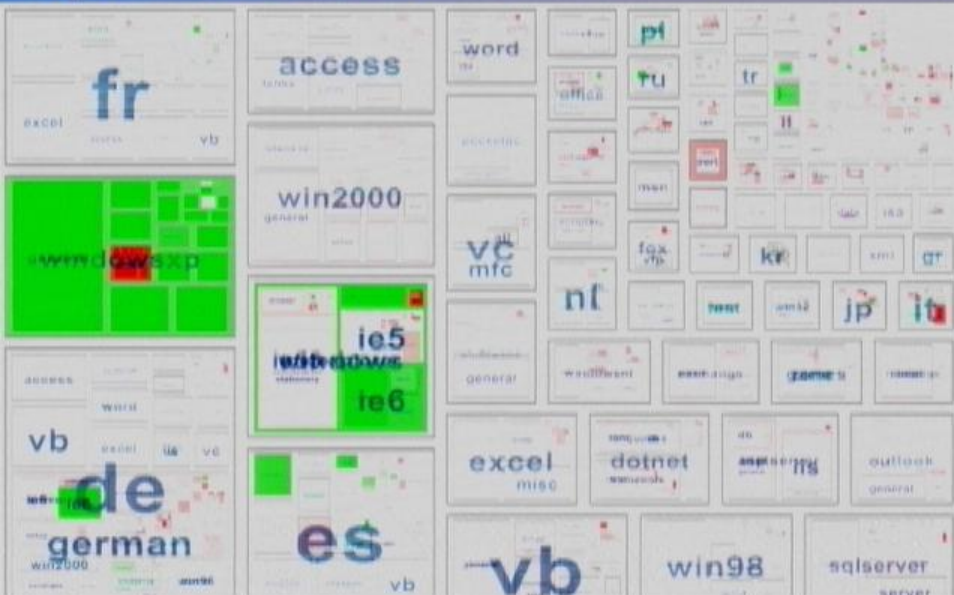


Microsoft.Public.*
August 2001



Microsoft.Public.*

September 2001



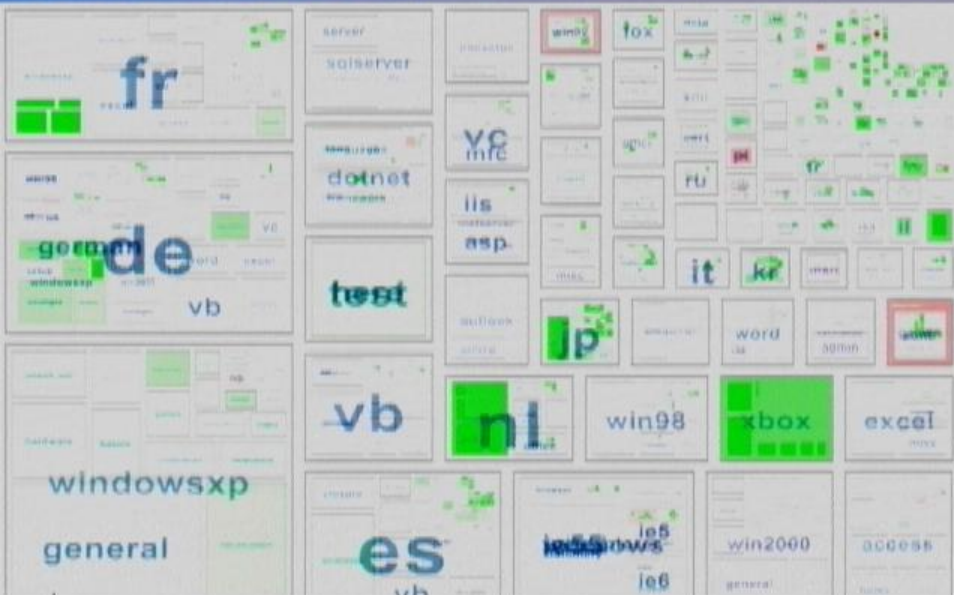
Microsoft.Public.*

October 2001



Microsoft.Public.*

November 2001



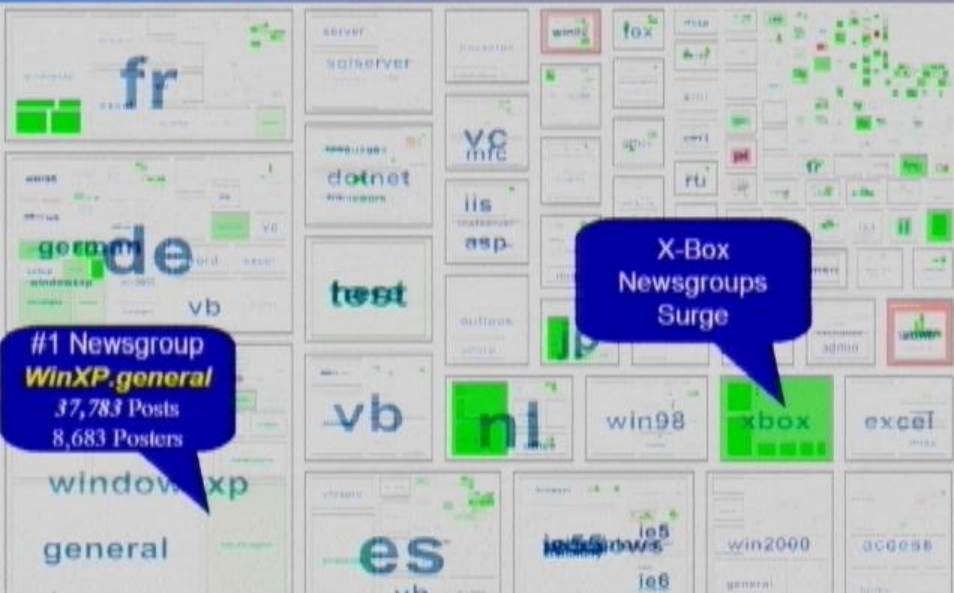
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November 2001



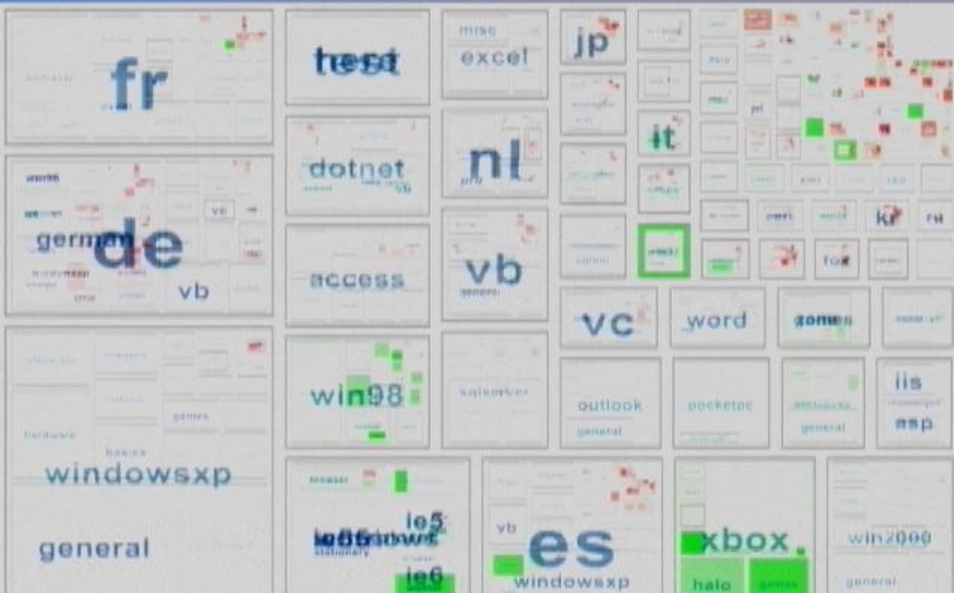
Microsoft.Public.*

November 2001



Microsoft.Public.*

December 2001



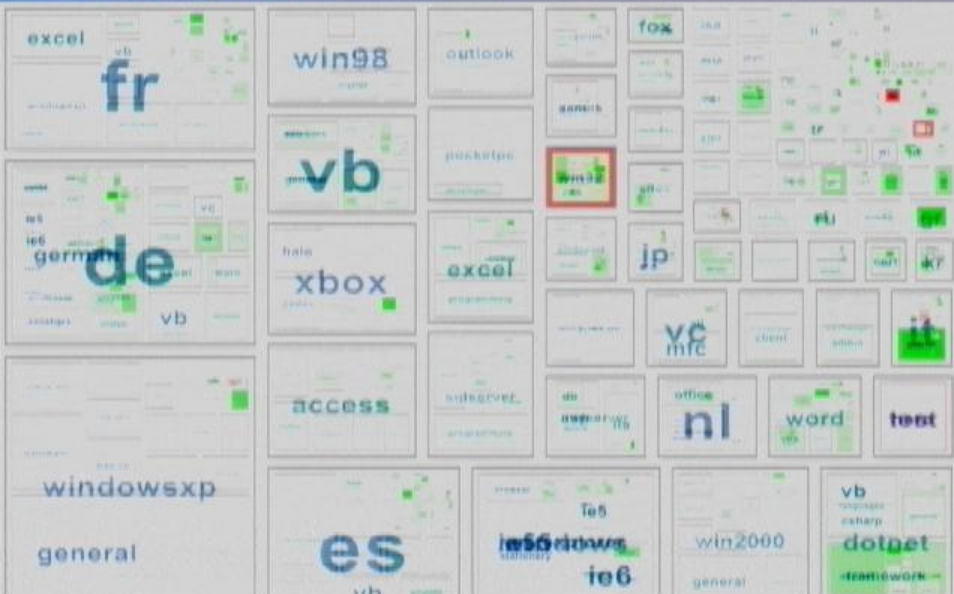
Microsoft.Public.*

December 2001



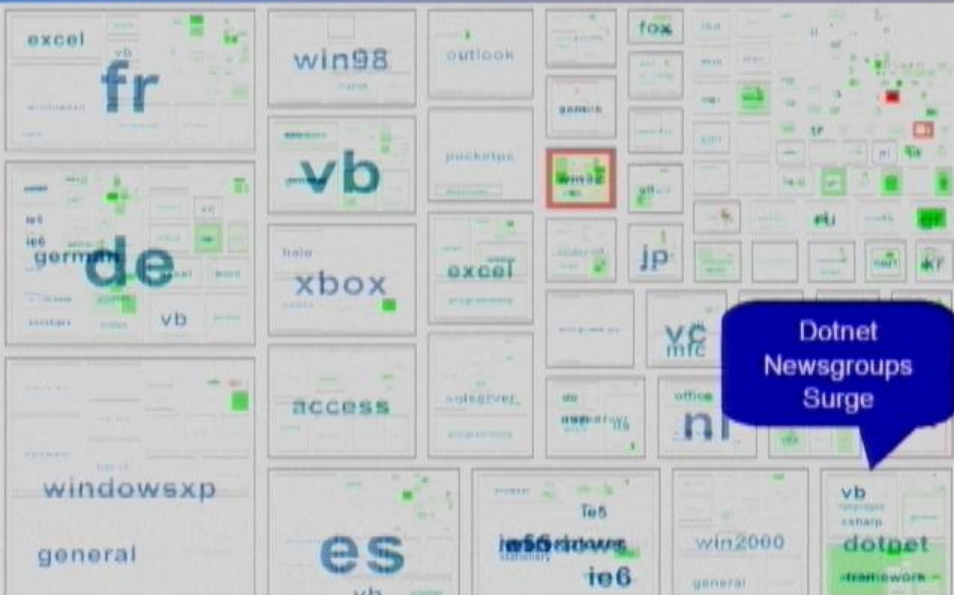
X-Box
Newsgroups
Continue Strong
Growth...

Microsoft.Public.*
January 2002



Microsoft.Public.*

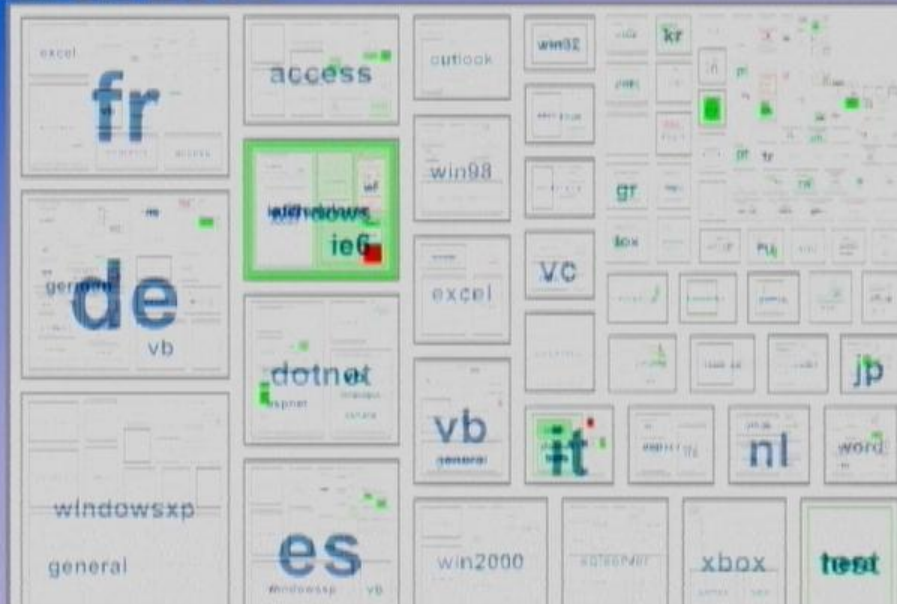
January 2002



Dotnet
Newsgroups
Surge

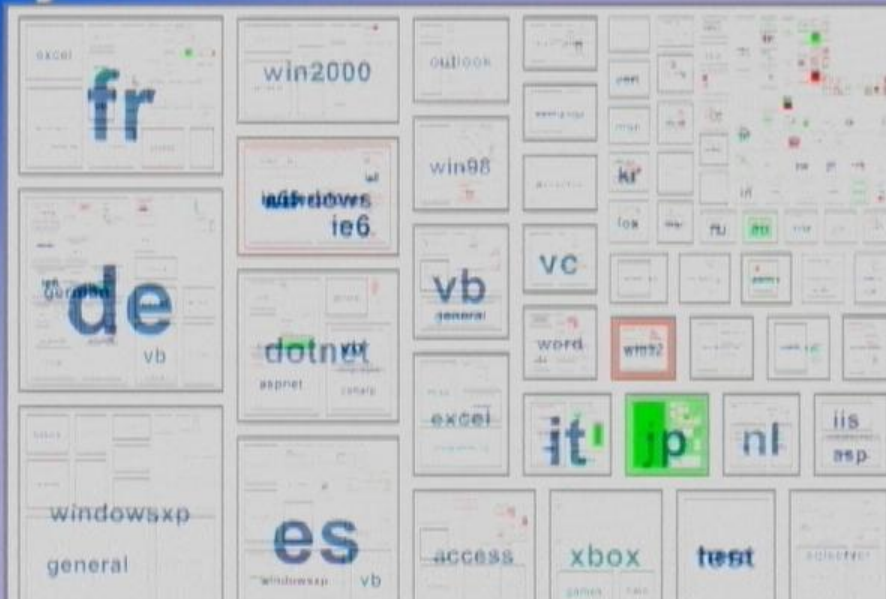
Microsoft.Public.*

March 2002

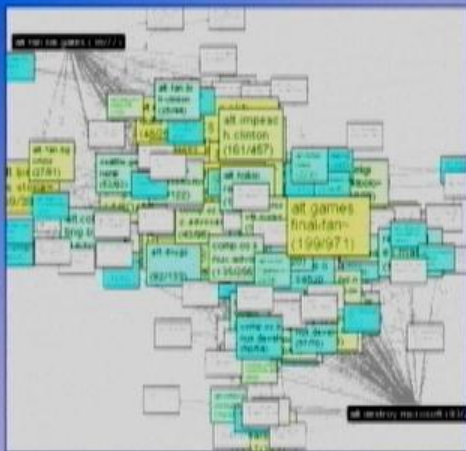


Microsoft.Public.*

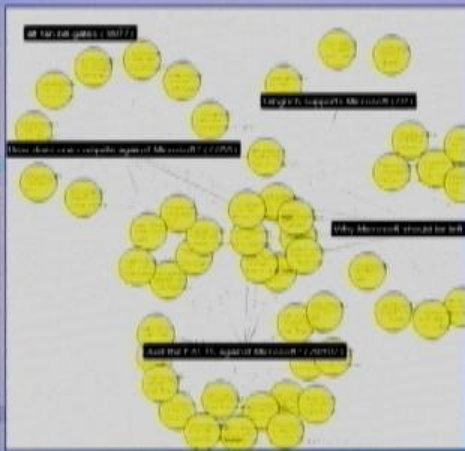
May 2002



Social Networks



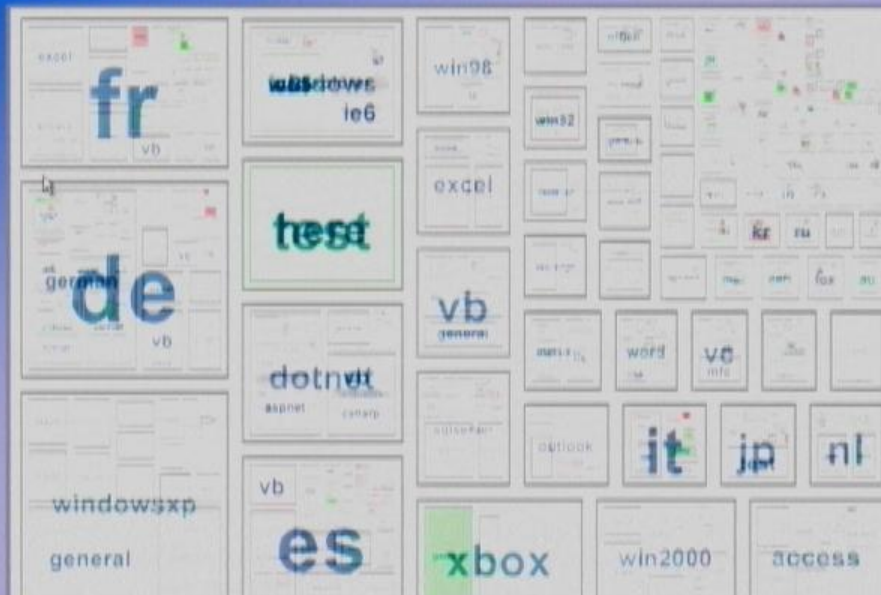
Inter-news group



Intra-news group

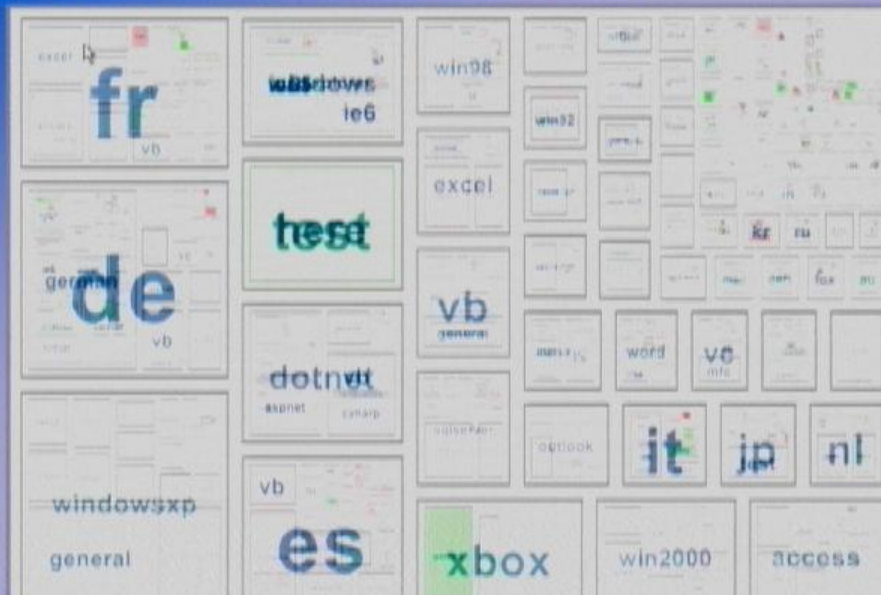
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June 2002

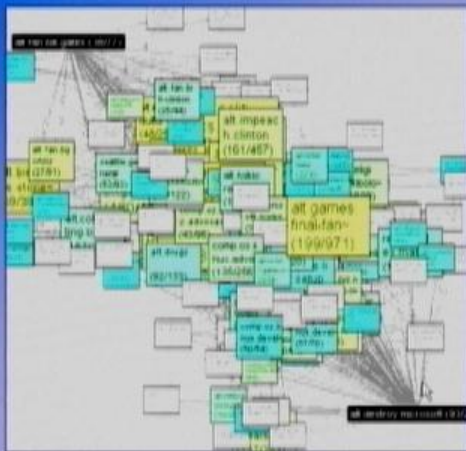


Microsoft.Public.*

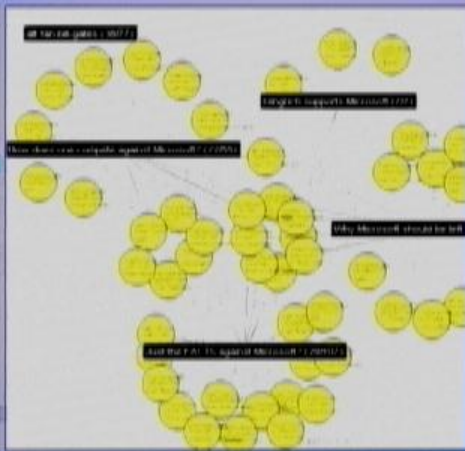
June 2002



Social Networks in Usenet



Inter-newsgroup



Intra-newsgroup

What is a healthy community?

Feature	Metric	Interpretation
Retention (of leaders)	Average # of Days Top 40 Authors are active	More is good, some people are present in the newsgroups everyday (even weekends), that's dedication!
Interaction	% Reply % Unreplied to	More is good Less is usually better
Size and Growth	# Posts % Change	More is good, up to a point, how big does this place need to get to be valuable anyway?
Topical Focus	% Crossposted	Some is good but more than 15% suggests a lack of focus.
Speed	Time to reply	Faster! Faster! Faster!
Microsoft Participation	% MS Posts, Replies	Careful! Don't stomp the locals, remember we don't own this place, and the goal should be to catalyze the community not BE the community

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Later we can add #
Questions Closed
and Average Time to
Closure.

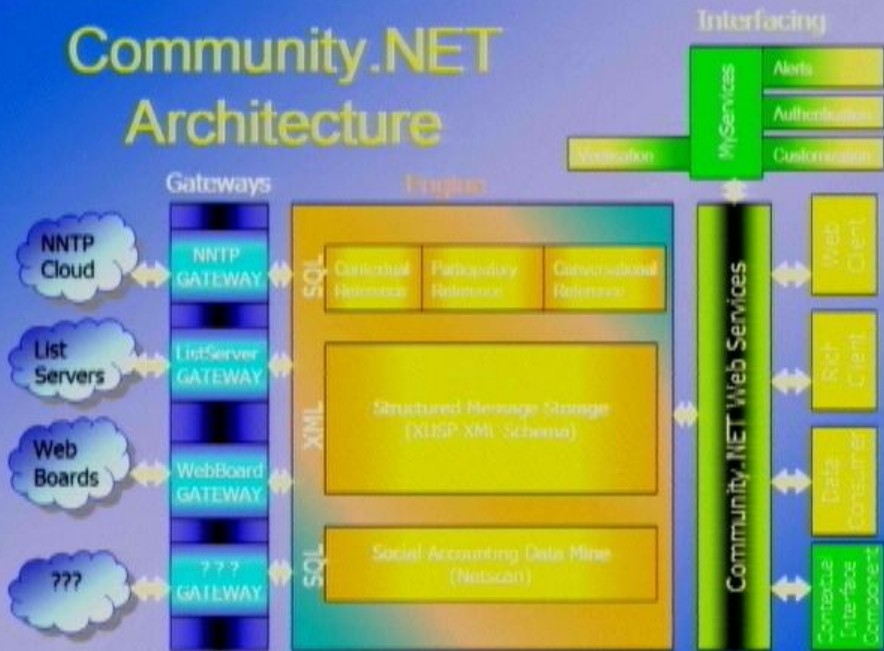
What's next?

- Web service interfaces to Netscan/HALO
- "Delta-ed" community metrics production
- Rich message store and index
- Interface design work
- "Listscan"

Listscan/DL

- Application of Netscan technology to internal Distribution Lists
 - Provide Report Cards for DL Activity
 - Highlight top Participants in DL
 - Provide access to DL Conversations (threads)
 - Centralized DL Access through Web Site
 - Long-term preservation of DL Content
 - New Collector Model : quick turnover and aggregation
 - New Database structures and deployment
 - New Web interface derived from Netscan/MSR-Halo
- Prototype in October, Beta in Dec/Jan, live by end of FY03
- **Social Accounting "Plus Pack" for Exchange DLs?**

Community.NET Architecture



Summarize each user's history: "What we tell other people about you."

Encourage people to help each other in real-time.

"My Questions"
Lists answers to questions you asked and summarizes the Answer-person's history

"My Watched People"
List where and what my favorite people posted recently

"My Communities"
Summarize each community's recent content.

Reputation metrics:
How many questions has this person closed already? How often do they return to this group? How many other people endorse them?

"My Answers"
Track my performance as an answer person.

The screenshot shows a user profile for 'Hans Smith'. The profile includes a header with the user's name, a profile picture, and a list of tabs: 'My Questions', 'My Watched People', 'My Communities', and 'My Answers'. The 'My Questions' tab is selected, showing a list of questions with columns for 'Question', 'Status', 'How Closed', 'Answers', 'Asked By', 'Asked On', 'Asked By', 'Status', 'Age', and 'Answer'. The 'My Watched People' tab is also visible, showing a list of people with columns for 'Name', 'Go Closed', 'Active Days', 'Watched By', and 'Watched Today'. The 'My Communities' tab shows a list of communities with columns for 'Community', 'How Closed', 'Active Days', 'Watched By', and 'Watched Today'. The 'My Answers' tab shows a list of answers with columns for 'Answer', 'How Closed', 'Active Days', 'Watched By', and 'Watched Today'.

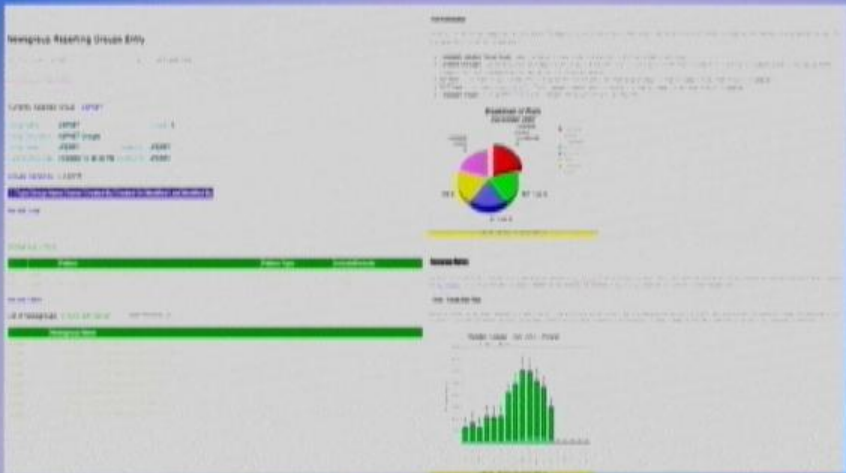
Project Details: Web Interfaces

- Web Services

- Flexible, programmatic access to underlying data, Platform Independent.
- Phase I: Author and Newsgroup Data
- Phase II: Thread level data
- Target Customers: Microsoft!
- Existing Customers: PSS, CDDG, and many internal developers. (number of hits = 7800)

First Web Service Applications

- PSS (Product Group EOM Report)



Newsgroup Crowds and AuthorLines

- Goals:
 - Visualize patterns of group and individual author behavior in conversational social cyberspaces
 - Provide an interactive, visual interface to Netscan data
 - Study user's ability to make "at a glance" inferences from visualization

Project AURA

<http://aura.research.microsoft.com/>

What is AURA?

- **A**dvanced **U**ser **R**esource **A**nnotation

“AURA is a wireless system to enable physical object annotations and to foster communities around these annotations.”

So, what is AURA really?

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PDA +

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PDA +

802.11 (Bluetooth/CDPD/3G) +

So, what is AURA really?

PDA +

802.11 (Bluetooth/CDPD/3G) +

Bar Code (RFID) Reader/Camera

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CueCat (barcode lookup) +

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Physical Object Annotation +

So, what is AURA really?

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Bar Code (RFID) Reader/Camera

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CueCat (barcode lookup) +

Physical Object Annotation +

Archival of AURA Digital Encounters

Roadmap



- Demo: ArtAURAs Gallery Tour
- Other AURA Features
- System Overview
- Research Opportunities
- Future Direction

ArtAURAs

- Collaboration with MS Arts Collection

ArtAURAs

- Collaboration with MS Arts Collection
- Goal
 - provide virtual guided tour for visitors to the Conference Center/eBC

ArtAURAs

- Collaboration with MS Arts Collection
- Goal
 - provide virtual guided tour for visitors to the Conference Center/eBC
- Current Status:
 - User Study at Building 33
 - Possible deployment

Demo



Symbol SPS 3000
Barcode reader &
Wireless Network Sled





Combined iPaq
and
SPS 3000

ArtAURAs : Virtual Art Tour



ArtAURAs : Virtual Art Tour

- "Digital shadow" of a GUID

 **AURA: Individual Scan**  8:43

Data: \$ €

Scanned Art: A02249

Title: Napperby Lakes Dreaming

Artist: Clifford Possum Tjapaltjarri

Date: 1993


Medium: Acrylic on canvas

Ethnicity: Other

Born: 1930?

Microsoft Art Location: 33/conf ctr


DETAILS ABOUT THIS ART:




More Text

Give Opinion



Read Opinion



File Account Scan 

ArtAURAs : Virtual Art Tour

- "Digital shadow" of a GUID

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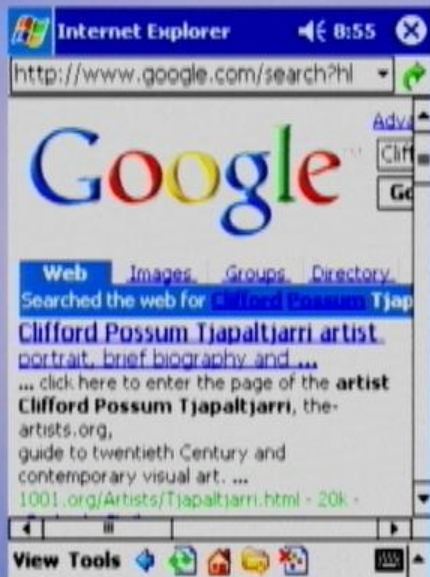
Read Opinion



File Account Scan 


ArtAURAs : Virtual Art Tour

- Google on Artist






ArtAURAs : Virtual Art Tour

- "Digital shadow" of a GUID

AURA: Individual Scan 8:43	
Data:	<input type="text"/> \$ €
Scanned Art: A02249	
Title:	Napperby Lakes Dreaming
Artist:	Clifford Possum Tiapaltjarni
Date: 1993	
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Microsoft Art Location: 33/conf ctr	
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More Text	
Give Opinion	
Read Opinion	
File Account Scan	

ArtAURAs : Virtual Art Tour

 AURA: Individual Scan  8:43			
Data:	<input type="text"/>	<input type="button" value="\$"/>	<input type="button" value="€"/>
Scanned Art: A02249			
Title:	Napperby Lakes Dreaming		
Artist:	Clifford Possum Tiapaltjarrri		
<p>Date: 1993 Medium: Acrylic on canvas Ethnicity: Other Born: 1930? Microsoft Art Location: 33/conf ctr</p> <p>DETAILS ABOUT THIS ART:</p> <p>Clifford is, next to the recently deceased Emily Kngwarreye, the most well known of all the Aboriginal dot painters, with an enormous number of commissions, prizes and international exhibitions to his credit. He was one of the last men to join the original group of Papunya painters. He is now losing his</p>			
<input type="button" value="Image"/>	<input type="button" value="Give Opinion"/>	<input type="button" value="Read Opinion"/>	<input type="button" value=""/>
File Account Scan 			

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

 Give Opinions 4:25 

Rate this item: Art

Privacy Preference: ☒ anonymous

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5

least favorable *most favorable*

Written remarks:

The style is odd but I like it.

Oral remarks:

Record Playback Remove

Okay Cancel

 ▲

ArtAURAs : Virtual Art Tour

- Physical Object Annotation

Give Opinions 4:25 ok

Rate this item: Art

Privacy Preference: ☒ anonymous

1 2 3 4 5

least most
favorable favorable

Written remarks:

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DETAILS ABOUT THIS ART:

More Text
Give Opinion
Read Opinion

File Account Scan

ArtAURAs : Virtual Art Tour

- Ratings and conversations

The screenshot shows a software window titled "Read Opinions" with a Windows logo icon on the left and a volume icon and "4:14" on the right. Below the title bar, the text "Total Opinions: 9" and "Average Rating: 3.89" is displayed. A list of six opinion entries is shown, each with a progress bar, a text box, and a speaker icon. The entries are: "I love it ...", "good. ...", "This is nice! ...", "This is pleasan ...", "Is this a tree? ...", and "This is an odd ...". The first three entries have their progress bars filled with blue. The last entry has a partially filled blue progress bar. Below the list is an "Okay" button. At the bottom right, there is a small icon and a scroll bar.

Read Opinions 4:14 ok

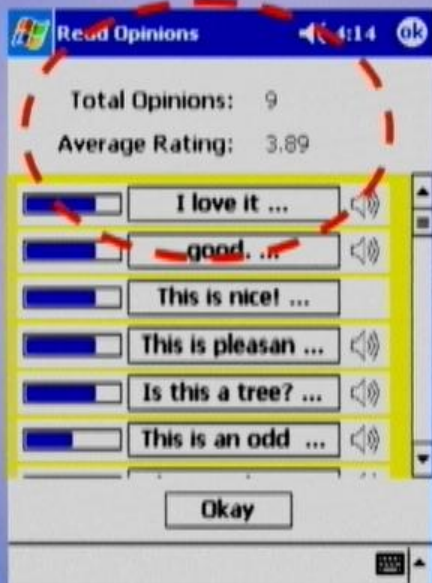
Total Opinions: 9
Average Rating: 3.89

I love it ...
good. ...
This is nice! ...
This is pleasan ...
Is this a tree? ...
This is an odd ...

Okay

ArtAURAs : Virtual Art Tour

- Ratings and conversations



ArtAURAs : Virtual Art Tour

- Ratings and conversations

Read Opinions 4:14 ok

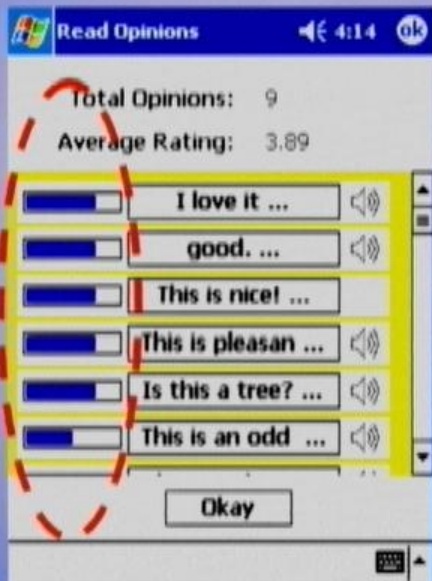
Total Opinions: 9
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	I love it ...	
	good. ...	
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	This is pleasan ...	
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	This is an odd ...	

Okay

ArtAURAs : Virtual Art Tour

- Ratings and conversations



ArtAURAs : Virtual Art Tour

- Ratings and conversations

Read Opinions 4:14 ok

Total Opinions: 9

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	I love it ...	
	good. ...	
	This is nice! ...	
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	Is this a tree? ...	
	this is an odd ...	

Okay

ArtAURAs : Virtual Art Tour

- Ratings and conversations

Read Opinions 4:14 ok

Total Opinions: 9



Average Rating: 3.89

	I love it ...	
	good. ...	
	This is nice! ...	
	This is pleasant ...	
	Is this a tree? ...	
	This is an odd ...	

Okay

ArtAURAs : Virtual Art Tour

- Detailed comment

 **Opinion Details**  8:44 

Rater: Not disclosed

Rating: 5

Timestamp: 3:18 AM 8/8/2002

Written remarks:

Amazing piece -- not that I am an artist!

Oral remarks:

Playback

Okay

Aura Portal: Aura User Community

Aura Portal - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Search Favorites Media

http://aura.research.microsoft.com/aura/AuraPortal/Default.aspx?tabid=0


Home | Aura | PTOB | Microsoft

Aura Portal

Home News Events Discussion

Welcome | Announcement | Mission | Contacts | FAQ | Search

Welcome!



Project Aura

Welcome to Aura Portal!

We are interested to study emergent individual and group behaviors associated with the ability to digital tag objects and places. In our system, a user can associate text, threaded conversations, audio, images, video or other data with a specific tag. Users can review the tags they have encountered and annotated in a custom web portal. Optionally, they can opt to have their comments be posted onto newsgroups. This allows search engines to index and essentially publish the association to other users. Physical annotations can be shared with other users and be rated by the users' reputation statistics.

Account Login

Email:

Password:

☐ Remember Login

[Log In](#)

[Register](#)

Aura Portal: Physical Annotation Repository

Aura Portal Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address bar: http://aura.pearl.com/aura/auraportal/Default.aspx?tabid=33




Web site: anonymous@aura.com Home : Aura : Home : My Portal : Logout

Aura Portal

Home News Events Discussion Downloads My Aura

You have scanned these barcodes:

Arts

Barcode	Image	Creation Time	Description
412219		8/17/2004 17:18 ART	HB Arts Collection art. by Gifford Peabody Tappan, 1992. Acrylic on canvas.
412433		8/17/2004 17:18 ART	HB Arts Collection art. by Ronald Bostan, 1997. Acrylic on paper.
411382		8/17/2004 17:12 ART	HB Arts Collection art. by Anna Bama, 1993. Mixed media on paper.

Aura Portal: Physical Annotation Repository

Aura Portal - Microsoft Internet Explorer

File Edit View Favorites Tools Help

http://aura.2000m.com/aura/aura/Default.aspx?tabid=6




Web site: anonymous@aura.2000m.com Home Aura Print My Aura

Aura Portal

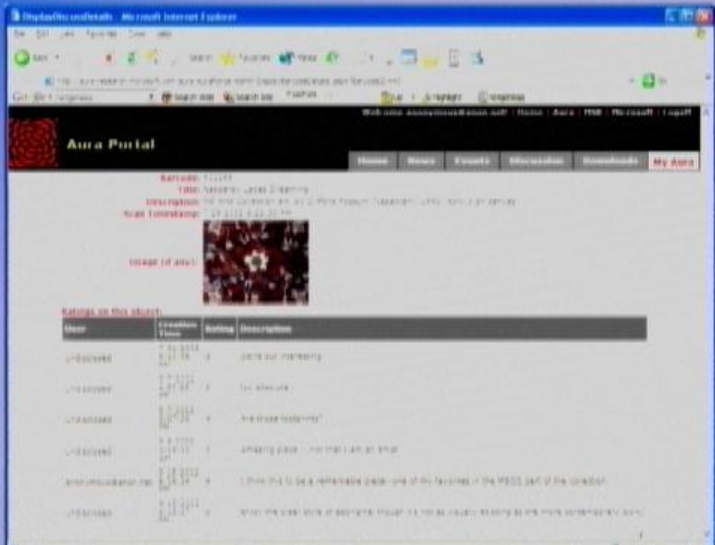
Home News Events Discussion Downloads My Aura

You have scanned these barcodes:

Arts

Barcode	Image	Creation Time	Description
A12345		2/3/2004 11:17:15 AM	HS Arts Collection art. by Robert Rauschenberg, 1985. Acrylic on canvas
A12346		2/3/2004 11:17:16 AM	HS Arts Collection art. by Robert Rauschenberg, 1985. Acrylic on canvas
A12347		2/3/2004 11:17:17 AM	HS Arts Collection art. by Robert Rauschenberg, 1985. Acrylic on canvas

Aura Portal: GUID-based Bulletin Board/Newsgroup



Roadmap



- Demo: ArtAURAs Gallery Tour
- Other AURA Features
- System Overview
- Research Opportunities
- Future Directions

Other barcodes

- UPC : consumer products
- ISBN: books
- Inventory and asset tracking

AURA : Consumer Products

- Consumer products with UPC codes

 **AURA: Individual Scan**  4:27 

Data: \$ €

Scanned UPC: 041800214501

Title: (*) WELCH GRAPE JUICE 4

Manufacturer: Welch Foods Inc.

upc: 041800214501

size: 22 oz

File Account Scan  ▲

AURA : Books ... and others

- Amazon and B&N services



The screenshot shows a software window titled "AURA: Individual Scan" with a Windows logo icon. The title bar also includes a volume icon and the time "3:24". The main area contains a "Data:" label followed by a text input field. To the right of the input field are two buttons labeled "S" and "C". Below the input field, the text "Scanned Book: 9780735615328" is displayed. At the bottom of the main area are two buttons labeled "Amazon" and "B&N". The bottom status bar of the window contains the text "File Account Scan" on the left and a small icon with an upward arrow on the right.

AURA: Individual Scan 3:24

Data:

Scanned Book: 9780735615328

File Account Scan

AURA : Books ... and others

- Amazon and B&N services

Internet Explorer 3:26

http://search.barnesandnoble.com/

NET APPLICATIONS FOR MOBILE DEVICES
Paul Ruggie
7281

Summer Sale! SAVE 30%

Retail Price: \$59.99
Our Price: **\$41.99**
You Save: **\$18.00 (30%)**
Readers' Advantage
~~\$59.99~~ [Join Now](#)
In Stock: Ships within 2 hours
Same Day Delivery in MA

Format: Paperback, 606p
ISBN: 0735615322
Publisher: Microsoft Press
Pub. Date: January 2002
Edition Desc: BK&CD-ROM
Barnes & Noble Sale Rank: 50,804

View Tools

Aura Portal: ISBN, UPC, Asset Tracking

Aura Portal - Microsoft Internet Explorer

Search

Books

Barcode

Creation Time

Bookstore

ISBN

Description

9780738619320	8/18/2002 2:20:49 AM	amazon.com	BARNEYS WHOLE	0738619320	
9780738619320	8/18/2002 2:22:02 AM	amazon.com	BARNEYS WHOLE	0738619320	
9780738619320	8/18/2002 2:22:27 AM	amazon.com	BARNEYS WHOLE	0738619320	

Other Barcodes

Barcode	Creation Time	Category	Description
214098	8/18/2002 3:09:16 PM	unknown	

Roadmap



- Demo: ArtAURAs Gallery Tour
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AURA Components

- Compact Framework Client(s)
- Backend Web Services
- Aura Portal
- Aura Runtime Library
- Aura Database/Cache
- (external services)

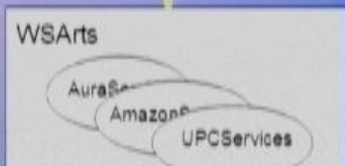
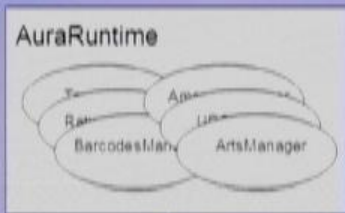
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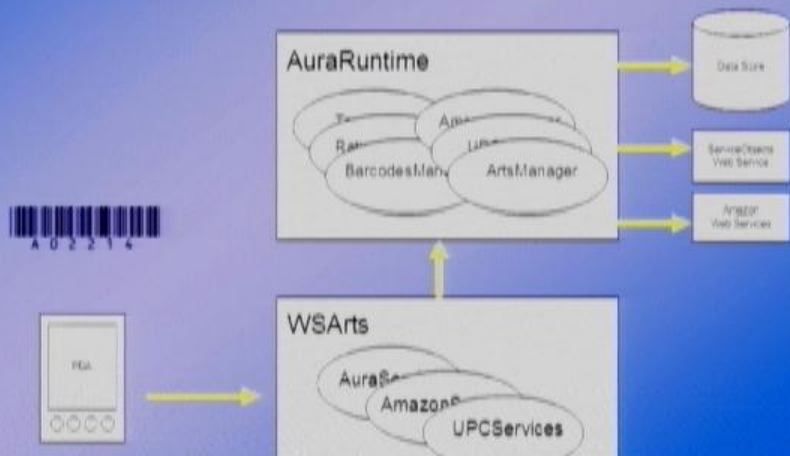
ArtAURAs: how it works



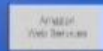
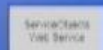
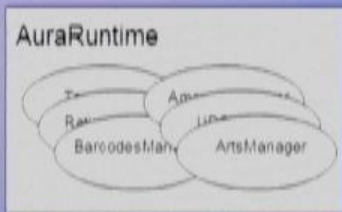
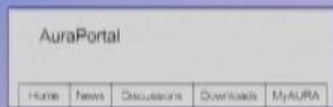
ArtAURAs: how it works



ArtAURAs: how it works



ArtAURAs: how it works



Summary of what AURA does

- Retrieve information about barcode/GUID:
 - MS Arts Barcodes
 - UPC Codes
 - ISBN
 - Music (soon)

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Summary of what AURA does

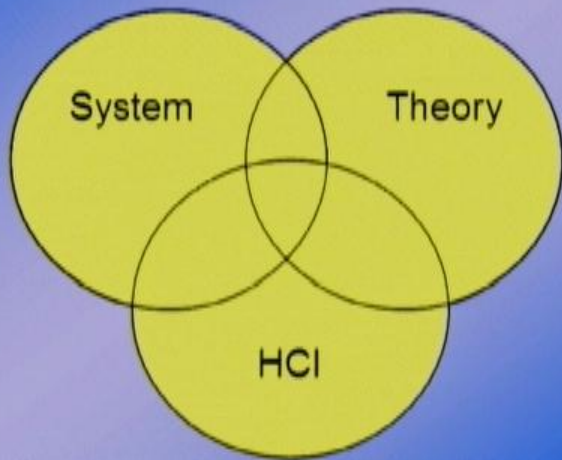
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- Archival Services
 - Books/Music collection (at work)
 - Shopping List (future)

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AURA Research Opportunities



AURA Research: HCI

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- Study new means of social interaction
 - beyond MIT/LCS Project Oxygen, Xerox Ubiquitous Computing, HP CoolTown, CMU Project Aura

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 - Dieberger, *et al.*, 2000

AURA Research: HCI

- Study new means of social interaction
 - beyond MIT/LCS Project Oxygen, Xerox Ubiquitous Computing, HP CoolTown, CMU Project Aura
- Social navigation using both physical and digital signposts
 - Dieberger, *et al.*, 2000
- Visualization of persistent interaction patterns

AURA Research: Systems

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- Privacy
 - Equivalence of P3P for physical annotations
(Focus: community, not individual)

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 - Equivalence of P3P for physical annotations
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- Trust and reputation system
 - Delegation of trust (Mui, *et al.*, 2001, 2002)
 - Reputation inference across contexts

AURA Research: Systems

- Privacy
 - Equivalence of P3P for physical annotations
(Focus: community, not individual)
- Trust and reputation system
 - Delegation of trust (Mui, *et al.*, 2001, 2002)
 - Reputation inference across contexts
- Vision/Speech
 - On the fly auto-detection of physical GUID (face/voice recognition)

AURA Research: Theory

- Public goods

- *The Commons Problem*: Hardin (1968)
- *The Collective Good Problem*: Samuelson (1954)
- *Free-rider Problem*: Grossman and Hart (1980)
- *Folk Theorem*: Freidman (1971), Fudenberg and Maskin (1986), Kandori (1994, 2002)

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- Evolution of cooperation

- *IPD*: Axelrod (1982), Boyd and Richerson (1989), Nowak and Sigmund (1998)
- *Social Preferences*: Fehr and Gächter (2001), Henrich, *et al.* (2002)

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- Sociology

AURA Research : Summary

- How “future” wireless and ubiquitous applications are available now, and their implications.

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Current Plans

- Several publications in preparation

Current Plans

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- User Study at the MS Conference Center

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Current Plans

- Several publications in preparation
- User Study at the MS Conference Center
- Replace laser barcodes
 - Digital camera
 - RFID

Possible AURA Killer Apps

- Comparison shopping

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- Book/Music Personal Archives
 - various partnering/co-marketing opportunities

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Possible AURA Killer Apps

- Comparison shopping
- Book/Music Personal Archives
 - various partnering/co-marketing opportunities
- Just-in-time consumer product delivery
- Indoor navigation
- Office asset/document management

<http://aura.research.microsoft.com/>

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Acknowledgements



Acknowledgements

- **Team Community Technologies**

Marc Smith

Duncan Davenport

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Paul Johns

Matt Kearns

Bas Hugenholtz



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Lik Mui (lmui@lcs.mit.edu)

Special thanks to
our partners in
CDDG and PSS!

<http://msr-halo>

<http://netscan.research.microsoft.com>

Our data are
available in XML!

Visit our websites!

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Web Services
Now Available

<http://msr-halo>

<http://netscan.research.microsoft.com>

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